



UNIVERSITY OF MACERATA

**RESEARCH DOCTORAL PROGRAMME IN
EDUCATION, CULTURAL HERITAGE, AND TERRITORIES**

CYCLE XXXVIII

THESIS TITLE

**Inclusive Leisure for People with Disabilities: Special Pedagogy
Frameworks in the Co-Design of Accessible Pathways within
Museum Contexts**

SUPERVISOR

Chiar.ma Prof.ssa Catia Giaconi

PH.D. STUDENT

Dott. Tommaso Santilli

CO-SUPERVISOR

Chiar.ma Prof.ssa Maura Mengoni

COORDINATOR

Chiar.ma Prof.ssa Anna Ascenzi

YEAR 2026



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Introduction

“Of all the great categories of life,
leisure is surely one of the most untidy”
(Ennis, 1968, p. 525)

The present work falls within the disciplinary field of Special Pedagogy, and is the result of the research conducted as part of the Ph.D. programme in “Education, Cultural Heritage and Territories” at the University of Macerata, within the curriculum of “Cultural Accessibility and Social Inclusivity”. By adopting the epistemological frameworks of Special Pedagogy (Schalock & Verdugo Alonso, 2002, 2006; Giaconi, 2015; Giaconi & Del Bianco, 2025), the research hereby presented aims at investigating the dimension of leisure as a dimension specific to pedagogical knowledge, integrating theoretical and practical aspects considered central to the care provision for people with disabilities and the construction of existential paths oriented towards a higher Quality of Life (QoL) (Giaconi, 2015; Giaconi & Del Bianco, 2025), and presenting an experimental research that grounds these considerations in two case studies related to participatory and co-design approaches to promote museum accessibility.

Leisure, in its most intimate essence, represents a dimension that is as common to everyday experience as it is elusive from a scientific point of view, capturing the attention of numerous scholars from a wide range of disciplines (Bull et al., 2003; Bramham & Wagg, 2014). The presence of a lively and pluralistic scientific debate

on the theorisation of leisure, however, does not prevent us from envisioning how it is possible to design a coherent and meaningful space for pedagogical reflection with regard to the impact of this dimension on the lives of people with and without disabilities, thanks to the contribution offered by research in Special Pedagogy (Canevaro, 2006; Giaconi, 2015; d'Alonzo & Giaconi, 2024; Giaconi & Del Bianco, 2025).

The reflections in this text, therefore, start from the recognition of leisure time in terms of fundamental freedom and inviolable right of every person, referring to Article 30 of the *Convention on the Rights of Persons with Disabilities* (UN, 2006), “Participation in cultural life, recreation, leisure and sport”. The Convention, in fact, establishes that it is essential to guarantee equal opportunities for participation in leisure activities and contexts for people with disabilities, calling on States Parties to take all necessary measures to ensure inclusive processes in this area (paragraph 1, paragraph 5). The right to leisure, however, is not only a prerogative for promoting widespread participation, but also emerges as a central trajectory for the development of each person's potential, highlighting its evolutionary and existential quality, as well as its value for the individual and the community (Canevaro, 2006; Giaconi, 2015; Giaconi et al., 2024b; Giaconi & Del Bianco, 2025). Paragraph 2 of the Convention, in fact, states that:

2. States Parties shall take appropriate measures to enable persons with disabilities to have the opportunity to develop and utilize their creative, artistic and intellectual potential, not only for their own benefit, but also for the enrichment of society (p. 22).

In this regard, the motivations behind the conduction of the research presented in this work are linked to the attempt to address the critical issues related to the design of authentic and meaningful leisure experiences for people with disabilities. Such issues, in particular, consist in the frequent marginalisation of the dimension

of leisure in the care provision for people with disabilities, as well as the risk of associating leisure time with therapeutic and rehabilitative activities, thus depriving it of its deeper and more relevant meanings for Quality of Life (Giaconi, 2015). In this scenario, the absence of a coherent and pedagogically oriented perspective on this dimension can create critical gaps in the planning of interventions and supports for people with disabilities throughout their lives, resulting in a lack of provisions and actions aimed at guaranteeing the right to leisure as a personal and collective educational resource, oriented towards (and functional to) Quality of Life (Giaconi, 2015; Giaconi & Del Bianco, 2025).

On the basis of these premises, this work aims to offer a pedagogical reading of leisure in relation to the Quality of Life and Life Project of people with disabilities, drawing on the perspective of Special Pedagogy for the promotion of a culture of inclusion in this dimension, and presenting an experimental research concerning the specific topic of museum accessibility. The aim of the text, accordingly, is to explore the theoretical foundations underlying the conceptualisation of leisure as a relevant dimension for the care of people with disabilities, while reflecting upon the practical implications of participatory research and inclusive training as means through which a higher QoL can be achieved within leisure contexts (Giaconi & Del Bianco, 2025).

Specifically, the first chapter will present a review of the main studies that define leisure as a field of scientific research, drawing on insights from Leisure Studies to provide readers with the conceptual tools necessary to explore this dimension in depth with regard to its salient characteristics, reflecting its theoretical complexity. Based on these references, the second chapter will detail the main aspects related to the active participation and social inclusion of people with disabilities in leisure. Drawing on the lines of inquiry that emerge in the first chapter, the main challenges and opportunities highlighted by studies that have investigated leisure and disability

will be illustrated, providing a sound pedagogical reflection concerning these. Subsequently, in the third chapter, in light of the trajectories outlined in the previous chapters, the connections between the dimension of leisure and the theoretical framework of Quality of Life will be presented, illustrating its position within the main proposals offered by scientific literature, in order to identify a theoretical paradigm capable of effectively restoring the value of leisure for the care provision for persons with disabilities. In the fourth chapter, in line with those considerations, we will reflect on leisure in reference to the Life Project, situating this dimension within the pedagogical principles and operational strategies that the Life Project aims to encompass (Pavone, 2009; Montobbio & Lepri, 2000; Ianes & Cramerotti, 2009; Caldin & Giaconi, 2021; Legislative Decree 62/2024; Giaconi & Del Bianco, 2025). In this sense, the trajectories of operationalisation of leisure within an integrated and harmonious system of actions, interventions and support aimed at constructing existential paths capable of reflecting the needs, interests and aspirations of persons with disabilities with a view to improving their QoL will be highlighted. Building upon the theoretical reflections on leisure and QoL, chapter five will introduce the experimental research mentioned above, which consists in the application of a co-design research protocol for the creation of inclusive leisure contexts, applied in two case studies related to cultural life participation and, specifically, museum accessibility. In this sense, we will present the research background, objectives, design and tools, highlighting co-design as its foundational pedagogical approach. Lastly, chapter six will illustrate the two case studies in which the research was applied, providing an in-depth presentation of the phases, co-design activities, results and main findings obtained, in light of the theoretical framework established in the previous chapters.

Overall, this work aims to explore, from a pedagogical point of view, an essential but, as studies have highlighted, particularly “untidy” dimension of life (Ennis,

1968, p. 525), reviving its educational and existential value as a coherent and meaningful trajectory (Giaconi, 2015; Giaconi & Del Bianco, 2025), and underlining the operational trajectories that can contribute to its enhancement across life environments. Such an operation, therefore, is not intended to erase the interdisciplinary richness of this dimension, but rather to enclose it within a pedagogical vision as a privileged perspective of analysis.

In this scenario, the question posed by quantum physicists throughout history, who wonder *where does passing time go* (Kinnebrock, 2013), seems reasonable to the extent that attention is focused—rather than on gravitational forces or mathematical laws—on the educational horizons linked to what leisure can offer to increase the wellbeing of each person in their life journey, recognising and valuing the uniqueness of their needs, interests and aspirations (Giaconi, 2015; Giaconi & Del Bianco, 2025).

1. Leisure: theories and meanings

1. Foreword

To conduct a reflection on the dimension of leisure in relation to the Quality of Life and care provision for people with disabilities, it is firstly necessary to define the theoretical frameworks within which this dimension can be interpreted and analysed from a pedagogical perspective. To this end, the present chapter seeks to reconstruct the studies that frame leisure as a field of interdisciplinary inquiry and scientific research. By analysing the main lines of research within the field of Leisure Studies, this chapter aims to provide readers with conceptual lines that will later be explored with reference to the experience of people with disabilities, from a pedagogical standpoint, throughout the rest of the present work.

Accordingly, the chapter is organised into six progressive sections. First, we will present an etymological and historical reconstruction of the concept of leisure, highlighting its semantic complexity and the consequent need for a theoretical framework capable of capturing its essential aspects. This reconstruction will then lead to the presentation of the epistemological and methodological frameworks of Leisure Studies, an articulated body of research dedicated to the study of leisure and its impact on individuals and societies (Bull et al., 2003). The richness of research in this field allows for the identification of three main themes explored by scholars, which will be examined in the following three sections. Specifically, the

fourth section will delve into the structural system of leisure and its constitutive macro-systemic elements (Tokarski & Zarotis, 2020). The concrete forms and experiences of leisure that can be achieved in everyday life (Ritchie, 1975; Kim et al., 2019; Tokarski & Zarotis, 2020) will be reconstructed in the fifth paragraph. Finally, the main theoretical conceptualisations of leisure in individual experience (Tokarski & Zarotis, 2020) will be presented in the sixth paragraph.

The gradual transition from the systemic to the individual level, offered by the reconstruction of the themes addressed by Leisure Studies, will allow us to gain a greater understanding of the complexity that characterises the dimension of leisure, opening up elements that will subsequently be the subject of reflection and pedagogical analysis.

2. Leisure: a complex construct

When we approach the topic of leisure, we immediately recognise a semantic and conceptual complexity which is linked to both the linguistic expressions used to define it and to the cultural interpretations that have been given to this dimension over time. Although it appears possible to state that leisure is a universal dimension of human experience, shared throughout all cultures and societies (Brown, 1991; Chick, 1998), it is also possible to observe how this dimension has been (and still is) the subject of highly diverse etymological and historical meanings.

In common sense, leisure is generally understood as a portion of time that is free from various obligations (first and foremost, those related to work), which can be available to all people, although in different quantity and quality depending on each person's specific life circumstances (Stebbins, 2018).

According to this interpretation, leisure is to be mainly understood as a “cut-out” that is obtained by removing all the other “times” that occupy each person's life:

family commitments, work or study, and so on. From a terminological point of view, in the Italian language and in several other languages there are no specific terms to describe and define this construct (Purrington & Hickerson, 2013): the generic expression *free time*, indeed, highlights the same perspective presented earlier, because it defines not what the object *is*, but rather what the object *is not*, i.e., *occupied time*. Consequently, this view expresses and implies the presence of an “occupied time”, which, according to this interpretation, precedes and subordinates free time from both a diachronic and conceptual point of view (Perulli, 1994). Furthermore, the expression used in the Italian language strongly emphasises the temporal quality of this dimension, rather than the nature or characteristics of the activities that can be ascribed to it (Zuzanek, 2006). Considering the expressions used in other languages, the same case applies to the German term *freizeit* (Chick, 2016).

In contrast, in other languages, this concept is defined by using terms that do not encompass the temporal dimension in their definition (Chick et al., 2013; Chick, 2016). We can, for instance, consider the Spanish term *ocio*, deriving from the Latin *otium* (a dimension opposed to *negotia*, i.e. political, economic, military and other commitments, aimed at discovering new experiences). This term, while retaining a “dichotomous” conceptualisation (*otium–negotia*), does not refer to the temporal dimension in its linguistic expression. We can also consider the French term *loisir*, deriving from the Latin *licere*, meaning “to be lawful” (from which the English term *leisure* derives), which emphasises the lawfulness of carrying out activities freely chosen and without constraints of any kind (Chick, 2016).

In line with these differences, it is possible to briefly trace, from a historical and cultural point of view, the specific developments that have led both to the definition of the current terms and to the maturation of specific interpretations in Western societies. According to existing studies on the subject (de Grazia, 1962; Juniu,

2009; Mari, 2023), in Ancient Greece, free time was considered a philosophical ideal of contemplation and search for truth, a time of intellectual and aesthetic value, unrelated (and not opposed) to the category of work. While in Roman civilisation, leisure was understood as a time for restoration and preparation for work, in the Middle Ages it became a social marker of wealth (Juniu, 2009). According to studies, the contrast between leisure and the dimension of work was consolidated with the valorisation of Christian-based work and the consequent view of leisure as a “waste of time” and an evasion of one's responsibilities (Juniu, 2009; Mari, 2023). Subsequently, with the advent of the Industrial Revolution and the transformation of production processes, the modern notion of leisure emerged: this is understood as time that was “regained” (Juniu, 2009; Mari, 2023), although, according to some authors, it was indirectly subordinated to the logics of production, since it was mainly geared towards consumption and passive entertainment (Juniu, 2009). Finally, from the 1970s onwards, leisure began to take on an increasingly central role in people's lives. As a result, the concept of modern leisure, understood as time devoted mainly to rest and consumption (Juniu, 2000), gradually made way to increasingly profound and complex forms of leisure use (Hunnicut, 2020; Tokarski & Zarotis, 2020). At the same time, as we will see, the infrastructure of leisure started undergoing a rapid growth, which translated into an increasingly varied and rich range of leisure activities available to people, although not equally accessible to all (Roberts, 2006). Therefore, in contemporary Western societies, leisure represents a central and independent dimension that allows people to experiment and have meaningful experiences for personal development, wellbeing and self-realisation (Kuykendall et al., 2018; Tokarski & Zarotis, 2020). Thanks to this relentless growth in opportunities and ways of enjoying leisure (Hunnicut, 2020), studies now consider it one of the most relevant indicators for defining the quality of life of societies (Tokarski & Zarotis, 2020). In this regard,

as we will explore in more depth in the following chapters, ensuring equal opportunities to participate in leisure experiences has become increasingly important for individual and collective wellbeing, highlighting the need to rethink contexts from an inclusive perspective in order to promote participation and social inclusion for all, including people with disabilities (Aitchison, 2009; UN, 2015; Giaconi et al., 2021; Shogren et al., 2022; Del Bianco et al., 2024; Giaconi et al., 2024a).

The etymological and historical reconstruction briefly proposed above allows us to understand how, starting from the frameworks of meaning in which leisure is intended to be placed, this concept can be object of profound questions that frame and define its characterising aspects (Ennis, 1968; Belloni, 1998; Juniu, 2009; Purrington & Hickerson, 2013; Chick, 2016). These questions are central not only in relation to the definition of this construct, but also to its operational delineation in pedagogical terms, as we will explore in more detail.

In line with these reflections, therefore, we will present a synthetic overview of the field of Leisure Studies, whose insights will allow us, according to a progressive passage that moves from a macro to a micro level, to define the dimension of leisure from an interdisciplinary scientific point of view.

3. Introducing Leisure Studies

The body of studies investigating the creation of and participation in leisure settings (including numerous areas such as sport, tourism, recreational activities, and the enjoyment of cultural heritage and media) is known as Leisure Studies (Bull et al., 2003). The aim of these studies is to identify the meanings and impacts of leisure from a social, cultural and individual point of view, moving from the

description to the interpretation of leisure, both in theoretical and practical terms (Bull et al., 2003).

The main feature of Leisure Studies, according to literature, is its significant interdisciplinary nature (Aitchison, 2009), due to which this field of research borrows epistemological and methodological frameworks from different social sciences: from sociology to psychology, from media studies to geography or anthropology, and so on. Generally, this interdisciplinary imprint offers a wide variety of theoretical and methodological insights that enrich the scientific discourse on leisure. However, it also fuels an ongoing critical debate about the boundaries and internal coherence of this tradition of studies (Aitchison, 2009).

From an epistemological point of view, researchers highlight an internal tension between empirical paradigms—based on objectively observable and measurable data—and interpretative paradigms—aimed at exploring more complex dynamics. Given the historical predominance of empirical research, the need to adopt critical/interpretative approaches has emerged over time, aimed at reflecting more accurately on the meanings and impacts of leisure in their dual subjective and social value (Coalter, 1997), thus promoting paradigms based on reflexivity and methodological pluralism (Blackshaw, 2014, 2016). In this direction, among the most widely adopted research approaches, studies have focused on the processes of meaning-making within leisure settings, considering social, cultural and individual factors in the study of this dimension, also to detect its impact on the construction of individual and collective identities (Aitchison, 2009).

In light of these considerations, it is therefore possible to outline the scenario of Leisure Studies as a dynamic and plural field of research, characterised by a constant redefinition of its theoretical and methodological boundaries (Bull et al., 2003; Zarotis et al., 2011; Bramham & Wagg, 2014; Tokarski & Zarotis, 2020).

As previously mentioned, in the following paragraphs we will examine three of the main areas of focus in Leisure Studies: the systemic level of leisure and its structural elements, the forms and types of leisure pursuits, and, finally, its possible conceptualisations. These steps will allow us to deepen our understanding of leisure and, at the same time, raise points for reflection that will be considered with reference to the experience of people with disabilities in the following chapters, according to the perspectives of Special Pedagogy.

4. The leisure time system

Having outlined the epistemological and methodological frameworks of Leisure Studies, we will now proceed with the illustration and analysis of the leisure time system: according to studies on the subject (Tokarski & Zarotis, 2020), this concept refers to the material and immaterial substrate through which it is possible to systematise and interpret the cultural, social and institutional factors that detail the circumstances within which it is possible to realise and disseminate values and practices related to leisure.

Further into detail, according to Tokarski and Zarotis (2020), the term “leisure time system” can be used to define a complex system comprising all the elements that have a direct or indirect impact on the meaning and pursuit of leisure activities within a given socio-cultural context (Chick, 2016; Tokarski & Zarotis, 2020). In other words, the leisure time system is configured as a macro-systemic framework within which tangible and intangible resources—functional to the realisation of leisure activities and the maintenance of their cultural and social value—fall.

The systematisation of the leisure time system proposed by Tokarski and Zarotis (2020) encompasses a series of structural elements of various kinds, as illustrated in Figure 1. Among these, first and foremost, are regulatory elements, such as rights

and policies, aimed at defining the legislative requirements that guide participation in leisure. Secondly, the leisure system encompasses all the resources dedicated to leisure activities, i.e. specific goods and services. Finally, the leisure time system includes elements related to the specific knowledge and skills that are developed in and for this field, encompassed in the science and professions of leisure. Starting from this reconstruction, we will now review each of these elements, referring to related studies that have examined their characteristics in depth over time.

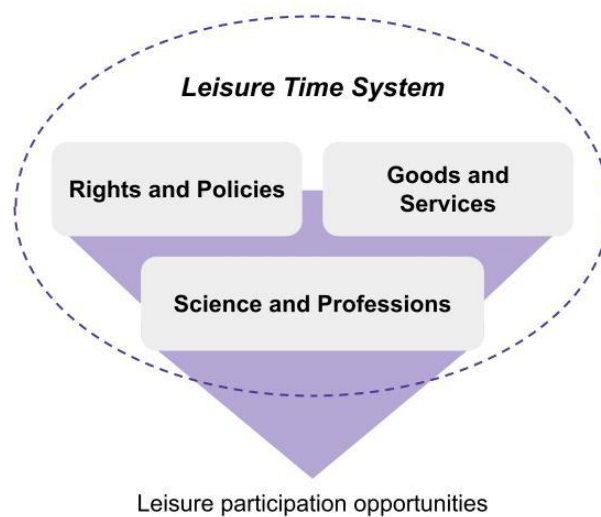


Figure 1 – Key elements of the leisure time system according to Tokarski & Zarotis (2020)

4.1 Rights and policies

As anticipated, a first necessary and functional element of the leisure time system consists in the body of rights and policies that can support leisure experiences. In this context, studies, legislative sources and international bills of rights propose an interpretation of leisure in terms of inviolable right and fundamental freedom of every person, reaffirming—in its formal and substantive recognition—the need to guarantee to all people the opportunity to participate in this dimension in an

independent and self-determined manner (UN, 1948, 1976, 1989, 2006; Veal, 2015; Karev & Doron, 2017; Lansdown, 2022; Byrne, 2024).

Looking at the specific contents of the policies, we can assess the presence of numerous regulatory sources that enshrine the right to leisure. For example, within the *Universal Declaration of Human Rights* (UN, 1948), among the numerous articles that refer to leisure, Article 24 states that “Everyone has the right to rest and leisure” (p. 7), while Article 27 highlights the “right freely to participate in the cultural life of the community, to enjoy the arts” (p. 8). Similarly, Article 7 of the *International Covenant on Economic, Social and Cultural Rights* (UN, 1976) highlights how fair working conditions imply “Rest, leisure and reasonable limitation of working hours and periodic holidays with pay, as well as remuneration for public holidays” (p. 9). Moving forward in chronological order, we can refer to Article 31 of the *Convention on the Rights of the Child* (UN, 1989), which emphasises that:

1. States Parties recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts. 2. States Parties shall respect and promote the right of the child to participate fully in cultural and artistic life and shall encourage the provision of appropriate and equal opportunities for cultural, artistic, recreational and leisure activity. (UN, 1989, p. 9).

To further establish the importance and value of leisure as an inviolable right and fundamental freedom to ensure the wellbeing of all people (Badia et al., 2013b; Lansdown, 2022; Byrne, 2024), the World Leisure Organisation (WLO), in cooperation with the United Nations, drafted the *Charter for Leisure* in 1970 (Henderson, 2014; Sivan, 2021), which was last updated in 2020 (WLO, 2020). The Charter for Leisure emphasises the right of every individual (child or adult) to participate in freely chosen activities for their self-fulfilment and the satisfaction of

their needs, specifying that this right applies regardless of a person's employment status (WLO, 2020). Furthermore, the Charter for Leisure illustrates how leisure is a means of safeguarding other fundamental rights, including mental and emotional wellbeing, self-expression and health, for each and every person (Badia et al, 2013b; Melbøe & Ytterhus, 2017; WLO, 2020). In line with these demands, Article 30 of the *Convention on the Rights of Persons with Disabilities*—already mentioned in the introduction to this work—safeguards “Participation in cultural and recreational life, leisure and sport” (UN, 2006, p. 31). As highlighted by Conroy (2007), the Convention has made it possible to frame leisure in the experience of people with disabilities through a “rights-based lens” (p. 3), referring to aspects such as reasonable accommodation, professional training, international cooperation and public awareness for its protection and ongoing maintenance.

In this context, however, studies analysing rights and policies in the leisure system emphasise that, despite a significant number of treaties and conventions, the protection of the right to leisure still faces significant challenges (Conroy, 2007; Veal, 2015; Bantekas, 2022). Research highlights, for instance, the difficulty in finding the tangible and intangible resources necessary to guarantee leisure in everyone's daily experience, the social, cultural and economic differences that hinder its universality and, consequently, the difficulties in promoting full and widespread participation (Cranston, 1983; Karev & Doron, 2017; Bantekas, 2022; Stoppa et al., 2022). These considerations therefore emerge as challenging trajectories for the promotion of participatory processes in leisure (Sivan, 2021; Lansdown, 2022; Byrne, 2024), calling for the identification of strategies and solutions capable of guaranteeing principles of accessibility and inclusion in leisure contexts, as we will explore in more depth throughout the second chapter.

Having reconstructed the role of rights and policies within the leisure time system, we will now move on to explore the goods and services that are aimed at offering concrete opportunities for participation in leisure.

4.2 Goods and services

In their analysis of the elements that are relevant to the leisure time system creation and maintenance, Tokarski and Zarotis (2020) emphasise the role played by the infrastructure of public and private goods and services that offer opportunities for pursuing different types of leisure experiences, from entertainment to rest. In general, studies show that public goods and services for leisure in Western welfare systems are aimed at promoting the wellbeing of communities and access to leisure for all citizens, while the private sector offers specialised and commercialised leisure experiences (Coalter, 2000; Mikalauskas & Kaspariene, 2016; Stoppa et al., 2022).

Within the broad range of goods and services offered for leisure, studies refer to the structuring of urban spaces dedicated to leisure with public access, such as green areas and parks, playgrounds, cycle paths or footpaths: according to researchers, these spaces offer themselves as concrete settings for the reproduction of leisure activities and, in parallel, the consequent construction of a more or less pronounced sense of community belonging and ownership (Johnson & Glover, 2013; Navarro et al., 2018).

A second area in leisure goods and services highlighted by the studies is related to participation in cultural life: such an area would include resources like public libraries, natural areas, museums and other exhibition spaces (González-Herrera et al., 2023), as well as the tourism sector and related services (Evcil, 2017). In this regard, we can also mention the entertainment sector, which includes the

consumption of cultural products (literature, music, theatre, cinema, television programmes, games and video games, digital contents) or the experience of services such as amusement parks and similar attractions (Moss, 2010). Leisure related cultural services would also include experiences such as the participation in various types of public events (e.g., film festivals, sports tournaments, cultural festivals, food fairs, etc.) (O'Sullivan, 2020; Hillman et al., 2021).

Fitness and physical wellbeing represent another key area in leisure goods and services, which include services offered by gyms, sports centres and wellness centres of various kinds, aimed at people who prefer health-oriented leisure activities (Nahrstedt, 2004). Finally, we can mention private services for specific activities related to various hobbies or personal passions (e.g., sports, dancing, volunteering, or recreational and artistic activities) (Stebbins, 1992, 2004; Tsaur & Liang, 2008).

In this context, the system of goods and services for leisure, as noted in recent studies (Hunnicutt, 2020; Tribe, 2020), has experienced a rapid growth in recent decades, which has led to its development into increasingly specialised offerings to contemporary societies, in parallel with the growing centrality of leisure as an autonomous and relevant dimension of everyone's life (Hunnicutt, 2020; Tokarski & Zarotis, 2020). In this context, the emerging trends identified by studies are linked to multiple factors: the spread of digital platforms for leisure in terms of *digital leisure* (e.g., streaming services for music or films, digital gaming, and so on) (Carnicelli et al., 2016; Silk et al., 2019; Tribe, 2020); the development of a true “experience economy” in leisure contexts (reflected in the search by communities for increasingly meaningful and personalised leisure experiences) (Scott et al., 2009; Pine & Gilmore, 2011); the research and development of solutions to promote the environmental and social sustainability of leisure (Vaugeois et al., 2017). However, as studies have shown, access to these leisure goods and services is not

always widespread and universal, giving rise to dynamics of inequality and exclusion that societies are called upon to contrast (UN, 2006; Roberts, 2006; Stoppa et al., 2022).

Having highlighted the existence of goods and services dedicated to leisure, it is now possible to explore the construction of the knowledge that supports and guides their diffusion, i.e. the knowledge and skills developed through science and professions in the sector.

4.3 Science and professions

According to Tokarski and Zarotis (2020), the leisure time system is completed by scientific and professional knowledge about leisure, which consists in the set of specific knowledge and skills that enable the structuring and offering of leisure opportunities. Reference is therefore made to a science of leisure, highlighting its potential for initial and continuing training as a professional and working field, which corresponds to the creation of corresponding professional figures (Tokarski & Zarotis, 2020). In this sense, authors refer to Leisure Studies and the field of research they investigate (Mansvelt, 2020), as presented earlier in this chapter.

Further emphasis is placed on leisure professions, which include the different careers and professional roles that focus on the planning, provision and management of leisure experiences and services. By way of example, we can mention some professions related to leisure, such as cultural and museum personnel, event organisers, tourist guides and sports operators. As will be explained in the following chapters, these figures play a critical and central role in each person's leisure experience, promoting opportunities for social participation and personal development through their specialist knowledge and skills (Hurd et al., 2023). In this context, the aforementioned growth in leisure infrastructure, as

highlighted by Chen and Gursoy (2008), has led educational institutions to develop increasingly structured and in-depth training courses in response to the growing demand for operators and professionals trained in various areas of leisure. As highlighted by the same authors, these education and training paths are characterised by an attempt to provide not only operational knowledge and skills, but also the know-how that can equip future professionals for the latest developments in the leisure sector, such as that related to the implementation of technological innovations. However, researchers point out that the heterogeneity of leisure contexts poses significant challenges for the development of specialised professionals, as they can be found within a wide spectrum of professional environments (from outdoor activity management to sport, from the expressive arts to tourism), in a constantly evolving scenario (Kraus, 2002; Chen & Gursoy, 2008).

As noted by Zimmermann and Tower (2017), the development of professional knowledge in relation to leisure requires an in-depth understanding of this dimension, the ability to structure leisure opportunities through designated goods, services and contexts, as well as recognition of its impact on the community, also in relation to dimensions such as community planning and inclusion (Edginton et al., 2015). In detail, the authors highlight how leisure professionals must possess “in-depth understanding of ‘what’ needs to be delivered and ‘who’ it is delivered for” (p. 3). These aspects are highlighted by researchers as central trajectories for providing leisure experiences that can have a positive social impact, also in terms of the wellbeing of the communities in which they are structured and to which they are offered (Zimmermann & Tower, 2017).

In conclusion, the analysis of the leisure time system highlights how leisure cannot be considered as an isolated phenomenon, but is rather deeply interconnected with structural factors that condition its development, maintenance, and core meaning. The very structure of the leisure time system raises important

considerations about the right to leisure for people with disabilities and the creation of inclusive opportunities for its enjoyment, as we will explore in more detail throughout the second chapter.

5. Leisure forms and experiences

Following the analysis of the leisure time system, which highlighted the structural complexity of leisure, it is now necessary to detail the different forms that leisure experiences can take in people's daily lives. From both a conceptual and operational point of view, scientific literature (Ritchie, 1975; Kim et al., 2019; Tokarski & Zarotis, 2020; Iso-Ahola & Baumeister, 2023) emphasises how leisure activities or experiences can be distinguished and identified on the basis of relevant dimensions: specifically, studies refer to the dimension of *participation* (which distinguishes between active leisure and passive leisure), the dimension of *sociality* (which distinguishes between social leisure and individual leisure), and the dimension of *investment* (which distinguishes between casual leisure, serious leisure, and project-based leisure) (Figure 2).

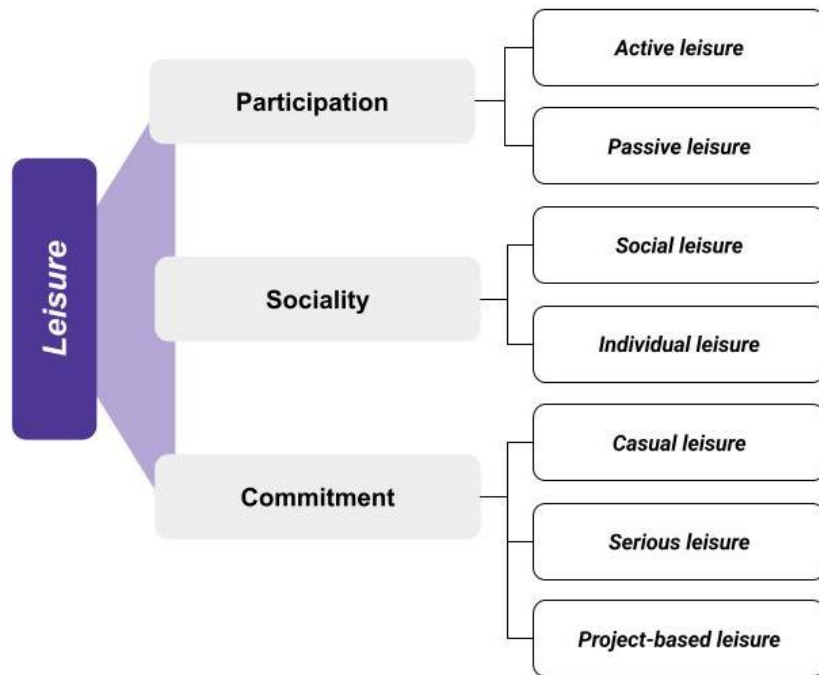


Figure 2 – Leisure forms and experiences

We will now proceed with an in-depth analysis of the different forms that leisure activities and experiences can take according to the three dimensions introduced above, reconstructing and discussing the main characteristics of each of them through a summary of the insights offered by related scientific studies.

5.1 Participation dimension

A first lens through which studies distinguish and analyse different forms and experiences of leisure is linked to the level of involvement and participation required to a person in order to engage in and pursue a leisure activity. In this sense, according to studies, it would be possible to distinguish between forms of active leisure and passive leisure (Holder et al., 2009; Shin & You, 2013; Iso-Ahola & Baumeister, 2023).

The former category, according to scientific literature, involves a greater investment of personal resources (physical and/or cognitive), greater intrinsic motivation and a more meaningful participation (Iso-Ahola & Mannell, 2004; Iso-Ahola & Baumeister, 2023). Active leisure activities are therefore characterised by the need to develop skills, build social relationships or achieve certain personal goals. Examples of active leisure pursuits include activities such as sports, creative hobbies or volunteering (Holder et al., 2009; Roy & Orazem, 2021).

In contrast, according to scientific literature, passive forms of leisure require less effort in terms of participation and active decisions. While these activities potentially offer the same levels of gratification, entertainment or rest as active leisure, they do not necessarily involve high levels of motivation, involvement and interaction with the surrounding environment (Schneider et al., 2004). Among the most common forms and experience that can be ascribed to passive leisure, existing studies include forms of entertainment and passive consumption such as watching television or scrolling through social media (Cho et al., 2018; Roy & Orazem, 2021; Iso-Ahola & Baumeister, 2023).

It is interesting to note that, according to scientific literature, an increase in the amount of leisure time does not necessarily imply greater wellbeing if the difficulty of allocating time to activities considered to be more active and meaningful translates into the pursuit more passive forms of leisure that are less demanding in terms of personal resources (Iso-Ahola & Baumeister, 2023). In this vein, research shows that active forms of leisure tend to produce higher levels of physical, mental and social wellbeing (Iso-Ahola & Mannell, 2004; Holder et al., 2009; Roy & Orazem, 2021; Iso-Ahola & Baumeister, 2023), while passive forms of leisure, which are generally less demanding, are often perceived as unsatisfactory (Iso-Ahola & Baumeister, 2023).

However, the same studies emphasise that the distinction between active and passive leisure presents conceptual challenges and cannot be conceived and applied with a deterministic stance, as even forms of passive leisure can produce benefits in terms of social connections, require physical and/or cognitive resources, and be perceived as constructive and positive for one's wellbeing (Haworth & Lewis, 2005; Iso-Ahola & Baumeister, 2023). In addition, researchers emphasise that passive leisure does not necessarily have a lower value than active leisure (Iso-Ahola & Baumeister, 2023). In this perspective, Roberts and colleagues (1989) emphasise the possibility of complementarity between active and passive leisure, highlighting how a varied repertoire of activities, tailored to individual needs, can represent the most meaningful solution to contribute to the person's wellbeing.

5.2 Sociality dimension

Alongside the dimension of participation, studies (Buttimer & Tierney, 2005; Fu et al., 2009; Solish et al., 2010; Iso-Ahola & Baumeister, 2023) argue that forms and experiences of leisure can also be interpreted according to a distinction between social leisure and individual leisure.

According to research, social leisure activities involve the direct involvement of other people, opening up a context of social interaction and sharing of free time pursuits (Auld & Case, 1997; Iso-Ahola & Baumeister, 2023). These activities are therefore characterised by the promotion of a sense of belonging, particularly strengthening social bonds and interpersonal relationships through the social interactions they imply because of their nature (Solish et al., 2010; Argyle, 2013).

In this sense, social leisure activities can include team sports, participation in social events (such as shows or parties), volunteering or joining associations (e.g. scouting) (Fu et al., 2009).

Individual leisure activities, on the other hand, according to related studies, are typically carried out individually and do not require direct interaction with other people. These may include personal entertainment (e.g., playing video games) or various forms of cultural consumption (reading, listening to music, watching television series or films) (Fu et al., 2009; Solish et al., 2010).

According to several scholars, the social dimension plays a central role in the choice of leisure activities (Graef et al., 1983; Auld & Case, 1997; Solish et al., 2010), offering people the opportunity to actively select the relationships and social contacts they wish to pursue through free time pursuits (Larson et al., 1986). Sociality can therefore be seen both as a motivation for undertaking leisure activities and as a benefit deriving from them (Auld & Case, 1997; Iso-Ahola & Baumeister, 2023).

Some studies (Astolfi et al., 2011; Schäfer & Eerola, 2018), however, highlight how even forms of individual leisure can be functional—in a more or less direct way—to the construction of social bonds: the enjoyment of music, books or films, as well as the use of social media, for example, can contribute to the construction of a common cultural background, facilitating interpersonal exchanges and promoting a sense of belonging. Following this line of thinking, other studies highlight how the development and spread of new digital technologies has given rise to new forms of leisure—namely *digital leisure*—in which the boundaries between the individual and the social dimensions are more blurred (Sintas et al., 2015; Schultz & McKeown, 2018; Silk et al., 2019). In this perspective, according to scholars, forms of leisure linked to digital media and of an apparently individual nature (such as playing video games or browsing social media) can enable people to build and maintain social networks that are perceived as meaningful (Astolfi et al., 2011; Rojas de Francisco et al., 2016; López-Sintas et al., 2017).

5.3 Commitment dimension

Continuing with the mapping of the main forms and experiences of leisure, a final dimension examined by scientific literature is that concerning the level of personal commitment and consistency required by the activities carried out within leisure settings. Based on this dimension, researchers distinguish between forms of casual leisure, serious leisure and project-based leisure (Stebbins, 1997, 2004; Elkington & Stebbins, 2014; Stebbins & Sachsman, 2017; Iso-Ahola & Baumeister, 2023), following a theoretical model that has been defined as the Serious Leisure Perspective (SLP) (Stebbins, 2020).

According to studies (Stebbins, 2004; Elkington & Stebbins, 2014; Iso-Ahola & Baumeister, 2023), forms of casual leisure are those that are practised without particular consistency or regularity, i.e. on an occasional basis. These include, for example, activities such as watching television, playing video games occasionally, going fishing from time to time, painting or playing a musical instrument as a hobby, or socialising with friends (Stebbins, 2004; Elkington & Stebbins, 2014; Iso-Ahola & Baumeister, 2023). According to the authors, these forms of leisure do not require any particular commitment or long-term planning, while they still meet the needs of wellbeing and personal fulfilment that any other leisure activity seeks to respond to (Stebbins, 2004; Elkington & Stebbins, 2014). In addition, studies show that, unlike serious leisure, these activities can produce a more immediate sense of gratification, as they do not require ongoing commitment to be undertaken in a satisfying way (Stebbins, 1997, 2004; Elkington & Stebbins, 2014).

Conversely, studies associate serious leisure with leisure activities that are practised consistently, systematically and with a significant personal planning, also with the aim of developing specific knowledge and skills through repeated and

regular involvement in them (Stebbins, 1992, 2004; Tsaur & Liang, 2008; Elkington & Stebbins, 2014; Iso-Ahola & Baumeister, 2023). According to this perspective, activities such as playing video games at a professional level, singing in a choir following rehearsals and technical lessons, practising competitive sports, participating in tournaments and competitions related to one's hobby (such as fishing tournaments, card games, etc.), providing ongoing volunteer service, and so on, fall within the scope of serious leisure. As Stebbins (1992) states, therefore, serious leisure consists of the systematic pursuit of an activity perceived as substantial, to the point of prompting the person to embark on a path focused on the acquisition and expression of specific skills, abilities and knowledge related to it. Specifically, the author distinguishes three different types of serious leisure (2004):

- *Amateur leisure*: forms of leisure that develop in areas such as art, science, sport or entertainment, which have professional counterparts actively involved in the same fields;
- *Hobbyist leisure*: forms of leisure such as collecting, crafting or activities that are not necessarily competitive (such as climbing or cooking), in the absence of professional counterparts in the same fields;
- *Career volunteering leisure*: forms of leisure based on individual or collective volunteering, such as activism or ongoing voluntary service with various types of organisations.

The author also identifies six qualities that characterise serious leisure and distinguish it from casual leisure (Stebbins, 1992, pp. 6-8): *perseverance*, that is to say the consistency with which the activity is practised; *career*, understood as the possibility of building a path of progressive goals within the leisure activity; *effort*, or the need to invest significant personal resources in the activity; *lasting benefits*, such as personal fulfilment and the creation of personal works; *unique ethos*, or a subculture linked to the participation in the activity that encompasses shared values

and norms; *identification*, that is to say recognising oneself in that activity to the point of considering it an integral part of one's own identity.

Finally, alongside casual and serious leisure, research highlights a third form of leisure within the dimension of investment: project-based leisure (Stebbins, 2005; Elkington & Stebbins, 2014; Stebbins, 2020). According to studies, this corresponds to forms of “short-term” leisure, linked to special and non-ordinary occasions, such as the celebration of anniversaries or holidays (Stebbins, 2020).

As with the other categories outlined in the previous sections, the same studies highlight how the proposed distinctions are not so clear-cut in real-life scenarios (Veal, 2016, 2019), where the characteristics of casual and serious leisure tend to overlap to reflect various degrees of personal investment (Stebbins, 2020). In addition, it is emphasised that each person seeks their own balance between casual and serious leisure, as both forms can contribute to promoting wellbeing and personal gratification (Stebbins, 2020).

In summary, mapping the main forms of leisure identified and explored by scientific studies allows us to appreciate this dimension in its various concrete manifestations. The heterogeneity of leisure experiences reconstructed here opens up central reflections and arguments about the participation of people with disabilities in leisure activities, as will be detailed in the second chapter.

6. Perspectives of analysis

After reconstructing the different forms and experiences of leisure identified by Leisure Studies, we can proceed with the presentation of the main theoretical conceptualisations of leisure offered by the studies in the field (Tokarski & Zarotis, 2020).

Numerous researchers highlight how Leisure Studies have long questioned the definition of the very construct of leisure (Chick, 2000; Juniu, 2009; Purrington & Hickerson, 2013; Hunnicutt, 2020; Iso-Ahola & Baumeister, 2023), framing it within different conceptualisation perspectives without ever reaching a shared and definitive view on how to properly define and theorise this dimension (Ennis, 1968; Zuzanek, 2006; Zarotis et al., 2011; Tokarski & Zarotis, 2020). In this context, the multiple attempts to define leisure proposed by researchers allow us to appreciate a plurality of interpretations that raise important questions regarding the identification, measurement and significance of this construct and life dimension (Kelly, 2009).

Within the broad spectrum of definitions of leisure offered by Leisure Studies, it is possible to summarise the main perspectives of conceptualisation starting from the reconnaissance proposed by Tokarski and Zarotis (2020). Specifically, the authors distinguish three main trajectories for conceptualising leisure: negative definitions, positive definitions and synthesis approaches. While negative definitions define leisure as an area opposed to and subordinated to work, positive definitions frame leisure as an autonomous dimension mainly linked to subjective factors. Synthesis approaches, differently, propose a broader view that takes into account various criteria, both objective and subjective (Neulinger, 1974; Ellis & Witt, 1990; Mannell & Kleiber, 1997; Tokarski & Zarotis, 2020).

We will now examine the different conceptualisations of leisure proposed by Leisure Studies, following the mapping by Tokarski and Zarotis (2020), discussing the main arguments of each perspective on the basis of related studies on the topic.

6.1 Beyond the leftover

Firstly, Tokarski and Zarotis (2020) highlight how numerous studies propose a conceptualisation of leisure based on a comparison with work, defining leisure time as a residual dimension in relation to it (Neulinger, 1974; Ellis & Witt, 1990; Mannell & Kleiber, 1997; Tokarski & Zarotis, 2020).

In detail, as reconstructed by the authors, these “negative” definitions frame leisure as the time that remains to a person after subtracting the time devoted to work and other daily commitments, framing it as a secondary, residual dimension that is subordinated to what can be defined as “occupied time” (Brightbill, 1960; May & Petgen, 1960). This perspective, as reconstructed by the authors, is based on a clear separation between work time and leisure time, aimed at identifying objective coordinates to circumscribe and define this construct from an empirical perspective (Brightbill, 1960; Kelly, 1972; Stebbins, 2018; Tokarski & Zarotis, 2020). In line with this approach, studies (Purrington & Hickerson, 2013) also attempt to define leisure on the basis of a specific repertoire of non-work activities (e.g. cultural life, sports, etc.) (Dumazedier, 1960; 1974; Henderson, 2012). According to some authors (Burke, 1995; Juniu, 2000), this approach is directly influenced by the concept of modern leisure as a time spent outside working hours, made possible by the advent of the Industrial Revolution in Western societies. In addition, according to Tokarski and Zarotis (2020), this perspective has been fuelled by research that, in the initial development of Leisure Studies as an independent scientific area, investigated how patterns of participation in leisure were influenced by those of work (Parker, 1995; Roberts, 1995).

However, this interpretation of leisure as “leftover” time presents several conceptual challenges, as highlighted by related studies (Purrington & Hickerson, 2013; Tokarski & Zarotis, 2020). Specifically, researchers highlight how this definition is difficult to apply to groups of people who are not employed (such as children, students, unemployed or retired people) or in situations where the

distinction between work time and leisure time is not so clear-cut (as in the case of freelance workers who have greater flexibility in managing their commitments). Furthermore, according to the authors, a perspective so anchored in temporal aspects would not take into account individual experiences and perceptions of leisure (Purrington & Hickerson, 2013; Tokarski & Zarotis, 2020). These considerations have therefore led studies to recognise the need to move beyond negative definitions, which are considered excessively rigid and reductive (Purrington & Hickerson, 2013; Tokarski & Zarotis, 2020; Iso-Ahola & Baumeister, 2023).

In this direction, as evidenced by research (Purrington & Hickerson, 2013; Tokarski & Zarotis, 2020), negative definitions have been progressively replaced by positive ones, in which “at the heart of the examination are the importance, content, motivations, functions and ways of experiencing leisure time”, defining leisure “in terms of development potential, emancipation, integration and/or subjective will decisions” (Tokarski & Zarotis, 2020, p. 142).

According to the authors, these definitions conceive leisure on the basis of “perception/experience” criteria (Tokarski & Zarotis, 2020, p. 144): the essence of leisure would refer not so much to the activity itself or the time in which it is carried out, but rather to the subjective meaning attributed to it by the person (de Grazia, 1962; Neulinger, 1974; Shaw, 1985; Deci et al., 1999; Malkoc & Tonietto, 2019; Tonietto et al., 2021; Iso-Ahola & Baumeister, 2023). This approach, therefore, emphasises the subjective and experiential meaning of leisure, going beyond the narrow temporal perspective and advancing an idea of leisure that can be described and understood as an autonomous dimension (Neulinger, 1974; Kelly, 2009; Tokarski & Zarotis, 2020; Iso-Ahola & Baumeister, 2023). In this vein, Iso-Ahola and Baumeister (2023) propose an interpretation of leisure as a potential source of meaning *in* life and *of* life, outlining this dimension as a form of self-expression that

is highly diversified among individuals (Chan et al., 2012; Auger, 2020) and highlighting the importance of factors such as freedom of choice and intrinsic motivation (Shaw, 1985; Chan et al., 2012; Iso-Ahola, 2013).

With regard to this perspective, studies (Kelly, 2009; Purrington & Hickerson, 2013; Chick, 2016) highlight the limitations of a purely subjective definition, which is considered inconsistent from a logical point of view: according to the authors, if leisure was understood solely as a state of mind disconnected from specific contexts or situations, it would be difficult to investigate it from a scientific point of view. As reviewed by Tokarski and Zarotis (2020), therefore, such approaches would shift the problem of defining leisure from its temporal delimitation to the definition of situations that can concretely represent it. The confirmation of these critical issues, therefore, leads us towards the need to develop deeper understandings through synthetic approaches.

6.2 Synthesis approaches

Following the reconstruction by Tokarski and Zarotis (2020), the conceptualisation challenges presented above have led Leisure Studies towards the development of synthetic approaches, in an attempt to restore the complexity of leisure through more articulated and integrated conceptualisations, based on a balance between objective and subjective dimensions.

Among the main synthetic approaches, it is appropriate to present the conceptualisation of leisure as the intersection of three elements: available time (*Free Time*), the activity performed (*Activity*) and the perception and experience of their intersection as leisure (*Perception/experience*) (Figure 3), adopted by numerous studies (Parr & Lashua, 2004; Chick, 2016; Tokarski & Zarotis, 2020). This approach, as highlighted by scholars (Zuzanek, 2006; Tokarski & Zarotis,

2020), allows for the synthesis of contextual factors and individual processes that contribute to defining leisure experiences as such, according to a multi-faceted perspective. In this sense, leisure “unites temporal and emotional elements of action and is constituted differently in every society, in which free time segments and subjective voluntary actions can be chosen” (Tokarski & Zarotis, 2020, p.145).

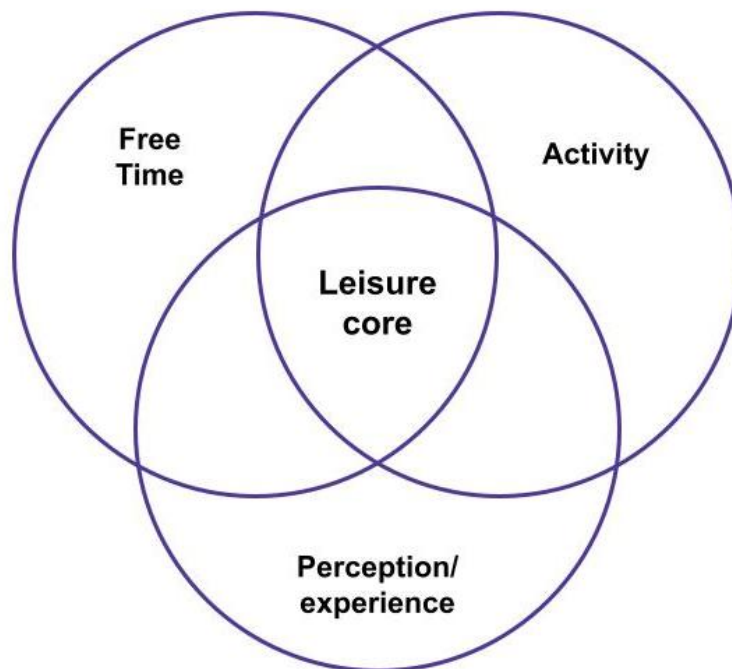


Figure 3 – Leisure model as an intersection between available time, activities and perception/experience (Source: Zuzanek, 2006, p. 186)

Among synthesis approaches, Kelly (2009) develops a conceptual paradigm that proposes to define and investigate leisure on the basis of a combination of individual and contextual factors. Specifically, the author proposes a matrix interpretation that identifies leisure activities based on two variables (Figure 4):

- *Freedom/discretion dimension*: this dimension concerns the degree to which the activity is the result of an autonomous choice by the person, or whether it is conditioned by external factors (such as economic, family or cultural factors);

- *Work-relation dimension*: this dimension considers whether the leisure activity is completely separate from the sphere of work, or whether it derives meaning in relation to it (for example, when it is chosen in continuity with one's profession or, conversely, as a form of escape).

Such a model allows the dimension of subjective choice to be integrated with the influence of contextual factors (such as social roles or cultural backgrounds) in the conceptualisation of leisure, placing this dimension in a more complex dynamic sphere (Kelly, 2009).

		Freedom/discretion dimension	
		Chosen	Determined
Work-relation dimension	Independent	1	2
	Dependent	3	4

Figure 4 – Leisure model as a matrix of four dimensions: freedom-discretion dimension (Chosen/Determined) and work-relation dimension (Independent/Dependent) (Source: Kelly, 2009, p.55).

Finally, among the synthetic approaches, we can mention that proposed by Purrington and Hickerson (2013), developed with the aim of overcoming the limitations of previous definition attempts based on individual aspects (such as the

temporal dimension, a specific set of activities or subjective perception). Specifically, the authors aim to conceptualise leisure as a behavioural phenomenon, separating (but not excluding) the mental states that influence the choice of leisure activities (such as attitudes and preferences) or that derive from it (such as the sense of satisfaction). In this vein, the authors define leisure as behaviour that “differs from culture-specific behaviours closely related to immediate survival and other practical necessities of life” (2013, pp. 130-131). Through this proposal, therefore, the authors offer a definition that can be applied interculturally, as it does not prescribe predetermined times or activities and does not suppose the value, causes or effects of leisure itself (which are deemed to be of a cultural nature), offering a more flexible and operational approach (Purrington & Hickerson, 2013).

Among the many interpretations aimed at unfolding the characteristics and meanings of leisure, we can therefore affirm that, according to the reconstructions proposed by scientific studies (Zuzanek, 2006; Purrington & Hickerson, 2013; Chick, 2016; Auger et al., 2018; Tokarski & Zarotis, 2020), leisure represents a complex dimension of human life, which encompasses three essential dimensions: 1) the availability of time that can be occupied with relative freedom of choice; 2) participation in specific activities, generally disinterested; 3) the personal feeling and perception that attributes to the first two factors the very meaning of leisure, linked to the pursuit of personal wellbeing (Auger et al., 2018).

According to this interpretation, existing studies (Zuzanek, 2006; Purrington & Hickerson, 2013; Chick, 2016; Auger et al., 2018; Tokarski & Zarotis, 2020; Iso-Ahola & Baumeister, 2023) emphasise how leisure can include a wide range of experiences: from play to sport, from rest to entertainment, from social and cultural life to the pursuit of hobbies and recreational activities, even extending to the consumption of food or drugs. Participation in these activities, as highlighted by Chick (2016), is linked to both personal factors (such as interests and preferences)

and contextual factors (such as accessibility, availability of resources, and socio-cultural context).

Overall, the review of the main perspectives on the conceptualisation of leisure allows us to highlight how, according to the reference studies, leisure represents a dimension that draws on a multitude of aspects central to its analysis, which are dynamically related to each other. At the same time, as reconstructed by Tokarski and Zarotis (2020), the common thread connecting all the proposals for analysing leisure is the centrality of this dimension in determining the levels of participation in social life and the wellbeing of the citizens who are part of it.

Having retraced the construct of leisure in its complexity and in the multiple levels that characterise it (Ennis, 1968; Belloni, 1998; Zuzanek, 2006; Juniu, 2009; Chick, 2016; Stebbins, 2018; Tokarski & Zarotis, 2020), it is now possible to proceed with an in-depth analysis of this dimension in relation to the experience of people with disabilities, which will be proposed in the second chapter.

7. Summary and implications

In this chapter we have reviewed the main studies that explore leisure as a field of scientific research, with the aim of laying the groundwork for pedagogical reflections on the experiences of people with disabilities in this dimension, raising key points that will be considered throughout the rest of this work.

Firstly, the concept of leisure has been explored from an etymological and historical perspective. As we have seen, both in linguistic expressions and cultural interpretations, this dimension has an intrinsic complexity that raises significant questions regarding its possible theoretical framings (Ennis, 1968; Belloni, 1998; Juniu, 2009; Purrington & Hickerson, 2013; Chick, 2016).

In an attempt to unfold the theoretical coordinates within which the dimension of leisure can be placed, the field of Leisure Studies has been reconstructed as a tradition of studies aimed at investigating the meanings and impacts of leisure on individuals and societies. Specifically, we have highlighted its interdisciplinary nature, the dynamism of its epistemological boundaries and its methodological pluralism (Bull et al., 2003; Zarotis et al., 2011; Bramham & Wagg, 2014; Tokarski & Zarotis, 2020). Within the broad framework of Leisure Studies, three areas of research were subsequently examined with the aim of providing a more detailed understanding of leisure and highlighting aspects relevant to a reflection on leisure in the experience of people with disabilities.

Specifically, the fourth paragraph proposed a reflection on leisure as a structural system, defined by studies as the leisure time system (Tokarski & Zarotis, 2020). The analysis of the leisure time system highlighted the role of rights and policies, goods and services, as well as science and professions in the quality of structural factors that condition the development and meaning of leisure within societies.

Continuing with the in-depth study of Leisure Studies, the different forms and experiences of leisure identified by research (Ritchie, 1975; Kim et al., 2019; Stebbins, 2020; Tokarski & Zarotis, 2020; Iso-Ahola & Baumeister, 2023) were then presented. Specifically, it was possible to explore the distinction between active and passive forms of leisure (based on the level of participation required by the activity), between social and individual forms of leisure (referring to the social circumstances that characterise the activity), and, finally, between casual leisure, serious leisure and project-based leisure (relating to the level of consistency and commitment with which the activity is pursued).

Finally, the main theoretical conceptualisations of leisure offered by studies in the field (Tokarski & Zarotis, 2020) were presented, highlighting the plurality of perspectives through which this dimension can be theorised (Chick, 2000; Juniu,

2009; Purrington & Hickerson, 2013; Hunnicutt, 2020; Iso-Ahola & Baumeister, 2023). In detail, referring to relevant scientific literature, the arguments supporting the negative definitions, positive definitions and synthesis approaches were reconstructed. While negative definitions conceptualise leisure in contrast to the work dimension and according to objective measures, positive definitions put forward a concept of autonomous and independent leisure, highlighting the subjective criteria of perception and experience for its definition. On the other hand, the synthesis approaches propose a comprehensive view, capable of considering objective and subjective elements jointly (Tokarski & Zarotis, 2020).

Overall, the insights gained in this chapter allow us to note how studies outline leisure in terms of a complex dimension that can be analysed from different angles and responds to different elements of scientific reflection (Belloni, 1998; Purrington & Hickerson, 2013; Stebbins, 2018). These considerations, therefore, offer a rich and articulated scenario for our special pedagogical reflection, paving the way for significant reflections on the inclusiveness of the leisure time system, the forms and experiences of leisure most commonly undertaken by people with disabilities, as well as the impact and significance of this dimension for their wellbeing.

Within this framework, therefore, the second chapter will proceed with an analysis of studies relating to the leisure experience of people with disabilities (Aitchison, 2003, 2009; Badia et al., 2013a; Giaconi, 2015; Melbøe & Ytterhus, 2017). Specifically, we will attempt to detail the main opportunities and challenges highlighted by scientific literature with regard to the promotion of inclusive processes in leisure contexts, from a pedagogical perspective.

2. People with disabilities and leisure: Special Pedagogy lines

1. Foreword

After outlining the dimension of leisure according to the perspectives and main areas of investigation identified by Leisure Studies, it is now necessary to situate our reflections in relation to the leisure experience of people with disabilities. To this end, retracing the lines of inquiry reconstructed in the first chapter, we will focus on the main themes that emerge from the combination of leisure and disability. The aim of this chapter, therefore, is to offer the reader a pedagogically oriented view of the active participation and social inclusion of people with disabilities in leisure experiences and contexts, detailing the main elements of pedagogical reflection that can inform care provision.

Specifically, the chapter is structured in five sections. First, the topic of disability within the Leisure Studies agenda (Aitchison, 2003, 2007, 2009) will be detailed. This reconstruction will pave the way for an analysis of studies on the leisure experience of people with disabilities, according to the areas of investigation presented in the first chapter. The third paragraph will explore the impact of the various elements of the leisure time system on the levels of inclusion and participation of people with disabilities, drawing on studies that investigate their perceptions and those of their caregivers (Boucher et al., 2010; Shields & Synnot,

2016; Steinhardt et al., 2021). The fourth paragraph will then examine the most frequent forms and experiences of leisure enjoyed by people with disabilities, expressed in their patterns of participation, observed and analysed by related studies (Buttimer & Tierney, 2005; Badia et al., 2013a; Ullenhag et al., 2014; Shandra, 2021). Subsequently, the fifth paragraph will focus on the meanings and impacts of leisure according to people with disabilities and their caregivers, referring to research that has focused on the value of this dimension for wellbeing (Aitchison, 2003, 2009; Boucher et al., 2010; Badia et al., 2011a; Dattilo et al., 2015; Marques et al., 2021). Finally, a pedagogical reinterpretation of the findings will be proposed, aimed at identifying crucial aspects for the management and construction of existential paths oriented towards quality outcomes, opening up to the need to adopt theoretical and operational frameworks capable of responding to the challenges identified.

2. From “marking a difference” to “making a difference”

Although research into leisure has traditionally focused on the needs and experiences of social groups at risk of systematic exclusion on the basis of personal characteristics (such as age, gender or socio-economic status) (Coalter, 1997; Aitchison, 2009), the issue of participation in leisure activities by people with disabilities has long remained on the periphery of the leisure studies agenda (Aitchison, 2003, 2007, 2009; Melbøe & Ytterhus, 2017).

According to Aitchison (2003, 2009), the marginalisation of people with disabilities in leisure research is primarily linked to the way in which leisure has historically been defined by Leisure Studies. The conceptualisation of leisure as a dimension subordinate to work and limited to the possibility of carrying out specific

activities in designated contexts has, in fact, consolidated the image of a worker with stable employment, without disabilities or needs related to their functioning profile, with the consequent exclusion of people with disabilities from the very representation of the “leisure subject” (Parker, 1971; Aitchison, 2009; Melbøe & Ytterhus, 2017).

According to Aitchison (2009), this same perspective has, secondly, led to the prolonged predominance of the medical model within Leisure Studies, promoting an essential interpretation of leisure experiences for people with disabilities, centred around the concepts rehabilitation and therapy, especially in the field of sport and recreational activities (Beart et al., 2001; Howe, 2008; Aitchison, 2009; Melbøe & Ytterhus, 2017). These aspects have often hindered the development of a perspective on leisure capable of grasping its meaning for people with disabilities (Aitchison, 2000, 2009; Macbeth, 2010). Following the author's reconstruction (Aitchison, 2009), the conceptual and epistemological change necessary to promote inclusive trajectories in the field of leisure consists in moving from a perspective of “marking a difference” to one of “making a difference” (p. 377). In the first case, leisure is interpreted as a space that highlights differences, acting as a boundary that distinguishes separate and exclusionary identities, practices and social dimensions. In the second case, conversely, leisure can become an area capable of generating new paradigms and frameworks of meaning, aimed at promoting participatory processes and building an inclusive culture of leisure, in which differences are not a reason for exclusion but rather a resource for collective enrichment.

In light of the above considerations, in the following paragraphs, through a reconstruction of the reference studies, we will highlight some recurring themes in research on leisure for people with disabilities. In this regard, it is necessary to clarify from the outset that the reconstruction and analysis of these themes, while following the lines of study investigated in the first chapter, is characterised by a

strong heterogeneity linked to the contexts and areas of research¹ considered in each study. Indeed, while it is possible to investigate literature from a perspective of complementarity and synthesis, it is also necessary to recognise the opposite: the irreducible heterogeneity that characterises its manifestations.

3. The leisure time system and participation of people with disabilities

Returning to the first area of investigation presented in the previous chapter, this section reviews studies that identify and investigate the experiences and perceptions of people with disabilities and their caregivers in relation to the leisure time system (Boucher et al., 2010; Shields & Synnot, 2016; Steinhardt et al., 2021). Specifically, these studies provide insight into how various factors—physical, cultural, organisational—can support or limit opportunities for active participation and social inclusion of people with disabilities in leisure contexts.

Starting from the theme of policies relating to the right to leisure for people with disabilities, scientific studies highlight how the presence of welfare systems capable of providing economic support, personal assistance services and support in the area of mobility and transport represent a key resource for promoting the participation of people with disabilities (Boucher et al., 2010; Aherne & Coughlan, 2017; Marques et al., 2021; Steinhardt et al., 2021). However, despite numerous regulatory references on the subject (UN, 2006; WLO, 2020), according to studies, safeguarding the right to leisure for people with disabilities still faces significant

¹ In fact, there are studies that focus on the dimension of sport or forms of active recreation (e.g., walking, active play, dancing) (Shields & Synnot, 2016; Stanish et al., 2016; Taliaferro & Hammond, 2016; Haythorne et al., 2022), studies focusing on the cultural dimension (Leahy & Ferri, 2022), studies exploring the field of tourism and nature-based recreation (Burns et al., 2009; Taylor & Józefowicz, 2012; Evcil, 2017; Bianchi et al., 2020; Sisto et al., 2022; Aguilar-Carrasco et al., 2023), or studies that explore entertainment or other activities (Swaine et al., 2014).

obstacles in real-world contexts (Evans et al., 2017; Bantekas, 2022; Byrne, 2024). In fact, research investigating the perceptions of people with disabilities and their caregivers highlights elements and dynamics that significantly limit the right to participate in leisure (Beart et al., 2001; Vanner et al., 2008; Badia et al., 2011a; Jaarsma et al., 2015; Evcil, 2017; Steinhardt et al., 2021; Haythorne et al., 2022).

In the field of leisure goods and services, studies' findings show the relevance of providing adequate support and accessible equipment for the pursuit of leisure activities, as well as structuring leisure settings that can be adapted to meet the needs of people with disabilities (Steinhardt et al., 2021; Haythorne et al., 2022). In this context, research highlights how assistive technologies and everyday consumer technologies (such as smartphones, tablets, and PCs) can facilitate leisure experiences by increasing opportunities for participation for people with disabilities, especially in cases where the person's mobility is limited (Yalon-Chamovitz & Weiss, 2008; Boucher et al., 2010; Marques et al., 2021; Steinhardt et al., 2021). Specifically, it is possible to observe how these technologies offer adaptable and customisable support for specific leisure activities: consider, for example, the use of new technologies for museum accessibility and interaction with heritage (Navarrete, 2019). Secondly, technological resources can constitute dimensions within which leisure experiences can be enjoyed: this refers to activities such as certain forms of entertainment, gaming or the use of social media, which are based on the use of these means, also promoting socialisation dynamics, as mentioned in the previous chapter (Cho et al., 2018; Marques et al., 2021; Roy & Orazem, 2021; Steinhardt et al., 2021; Iso-Ahola & Baumeister, 2023). Thirdly, according to studies, technologies are privileged (and frequently used) means for collecting and exchanging pre-visit information about the accessibility conditions of contexts such as tourist sites or natural parks (Evcil, 2017; Bianchi et al., 2020; Aguilar-Carrasco et al., 2023). In this regard, the ability to find reliable information

about the accessibility of leisure settings emerges as a central element in the decision-making process, as much as the available supports themselves (Shikako-Thomas et al., 2013). This aspect is particularly important in situations such as choosing a tourist destination, as it allows people to find out about the accessibility solutions that they can benefit from in a specific context (Evcil, 2017).

Among the factors that can limit participation, research shows that the poor accessibility of leisure goods and services is a significant obstacle (Marques et al., 2021; Steinhardt et al., 2021). Specifically, existing studies reveal the existence of numerous leisure contexts that are not designed to be inclusive and lack the necessary resources to accommodate the needs of people with disabilities (Taylor & Józefowicz, 2012; Aguilar-Carrasco et al., 2023; Vanolo, 2024), i.e. infrastructure and services that are not accessible from a physical and/or cultural point of view (Marques et al., 2021; Steinhardt et al., 2021; Haythorne et al., 2022). Studies mention, for example, critical issues related to the physical accessibility of spaces such as urban parks or beaches (Marques et al., 2021; Perry et al., 2021; Haythorne et al., 2022; Vanolo, 2024), tourist destinations, places of historical interest, hiking trails and natural areas (Burns et al., 2009; Taylor & Józefowicz, 2012; Evcil, 2017; Bianchi et al., 2020; Sisto et al., 2022; Aguilar-Carrasco et al., 2023).

In this regard, the need to travel long to reach leisure settings is highlighted as a potential limitation in light of aspects such as the accessibility of transport services and the possibility of moving independently, which have a significant impact on the choice of activities to participate in (Beart et al., 2001; Boucher et al., 2010; Marques et al., 2021; Steinhardt et al., 2021; Aguilar-Carrasco et al., 2023). A further obstacle to participation that emerges from scientific research is related to the financial resources required to carry out leisure activities (Shields & Synnot, 2014). Especially where individual support or the use of special equipment is

required, significant expenses may arise, requiring a considerable financial commitment (Rimmer et al., 2004; Armila et al., 2017; Wright et al., 2019; Steinhardt et al., 2021). Finally, according to studies, administrative and bureaucratic aspects related to participation in leisure can also be perceived as an obstacle (Boucher et al., 2010; Anaby et al., 2013; Armila et al., 2017).

An aspect that was not directly addressed within the theoretical definition of the leisure time system, but which is referred to in studies focusing on the experiences of people with disabilities, is the informal support networks that are established between the families of people with disabilities and between them and the services (Marques et al., 2021; Steinhardt et al., 2021). Research shows that the creation of informal networks—based on the support of those involved in the person's life (such as educators or teachers) and on mutual dialogue between families—can facilitate the exchange of information and participation in leisure (Marques et al., 2021; Steinhardt et al., 2021). According to Marques et al. (2021), the cross-cutting impact of this dynamic highlights how the wider community in which the person with disability and their family live can play a key role in promoting sustainable pathways for participation in leisure.

Finally, considering the human resources employed in leisure services, research highlights the frequent lack of inclusive knowledge and skills among leisure operators and professionals (such as museum personnel, sports operators, etc.), which translates into a systematic limitation of access to leisure (Shields & Synnot, 2014; Steinhardt et al., 2021; Aguilar-Carrasco et al., 2023). According to existing studies, the scarcity of human and material resources for inclusion would lead people with disabilities and their families to have to take care themselves of any support and adaptations necessary for full participation in these contexts (Steinhardt et al., 2021), resulting in an additional burden to support participation (Evcil, 2017; Aguilar-Carrasco et al., 2023).

In conclusion, scientific literature highlights the role played by policy makers, service providers and professionals in promoting active participation in leisure settings, emphasising the importance of coordinated actions to structure an integrated and inclusive leisure time system based on multi-sectoral organisation and the development of inclusive skills among all those involved (Aitchison, 2003; Boucher et al., 2010; Wright et al., 2019; Steinhardt et al., 2021).

According to Boucher et al. (2010), the elements for reflection outlined here are closely related to the forms of leisure most pursued by people with disabilities, influencing their choice of activities, frequency and conditions of participation. In light of this, after outlining the main themes that emerged from research on the role of the leisure time system in the experience of people with disabilities, we propose—as anticipated—to explore their patterns of participation, taking as a reference the specific forms and experiences highlighted by the studies discussed in the first chapter.

4. Leisure forms and experiences in people with disabilities' everyday life

Based on the second area of investigation presented in the first chapter—the forms and experiences of leisure identified by Leisure Studies—this section proposes a reconstruction of studies that investigate and explore the patterns of participation in leisure activities by people with disabilities, i.e. the most frequent forms and experiences that characterise this dimension in their daily lives (Buttimer & Tierney, 2005; Badia et al., 2013a; Ullenhag et al., 2014; Shandra, 2021).

These studies highlight aspects such as the types of activities carried out, the intensity or frequency of participation and the circumstances related to such participation, providing a clear picture of relevant trends and needs that can inform

the promotion of inclusive processes and meaningful experiences for people with disabilities within leisure contexts (Solish et al., 2010; Kanagasabai et al., 2017; Heister et al., 2023). Looking in more detail, in general, numerous studies highlight a frequent concentration of passive, individual and casual forms of leisure in the everyday life of people with disabilities (Beart et al., 2001; Aitchison, 2003; Buttmer & Tierney, 2005; Steinhardt et al., 2021; Heister et al., 2023).

In detail, with regard to the dimension of participation, studies assess a general tendency to spend one's free time in passive, sedentary forms of leisure that are less demanding in terms of personal resources (Badia et al., 2013a; Pagán-Rodríguez, 2014; Heister et al., 2023; Cottini, 2024b), especially with advancing age (Badia et al., 2013a; Pagán-Rodríguez, 2014; Heister et al., 2023). Among these, researchers mention activities such as reading, watching television, relaxing or using digital devices for leisure and personal entertainment (social media and streaming services) (Solish et al., 2010; Pagán-Rodríguez, 2014; Shandra, 2021).

With regard to the social dimension, research (Solish et al., 2010; Pagán-Rodríguez, 2014; Shields & Synnot, 2014) finds limited participation of people with disabilities in social leisure activities (such as sports, events or group activities) compared to peers without disabilities. Solish and colleagues (2010) highlight how social interactions between people with disabilities in their free time tend to involve mainly family members or other caregivers rather than friends or peers (Cottini, 2024b). According to Evcil (2017), the presence of a family member/caregiver can be experienced both as a facilitating factor, when it encourages sharing and socialisation, and as an obstacle, when it fuels the perception of reduced autonomy. In this regard, involvement in leisure activities characterised by interaction with people outside the family sphere appears to be significantly lower than for people without disabilities (King et al., 2003; Coster et al., 2012; Krieger et al., 2018). In some cases, according to Aitchison (2000), even therapeutic activities such as

physiotherapy are perceived by people with disabilities as forms of social leisure, as they may be one of the few opportunities they have for interaction outside the family routine. In addition, some authors highlight how recreational opportunities offered to people with disabilities are often placed in contexts of separation, such as special groups (e.g., in sports) or specialised centres, hindering real community participation (Melbøe & Ytterhus, 2017; Heister et al., 2023). According to Riley et al. (2008), therefore, the promotion of such leisure programmes would not be an adequate response to the inclusion and socialisation needs of people with disabilities.

In this context, we can refer to the study by Beart et al. (2001), which analyses the dimension of socialisation by distinguishing between *home-based* and *community-based* activities². The former include, for example, moments of relaxation, creativity or housework, while the latter include activities such as sports, recreational outings or participation in events. Although useful in providing a classification, the authors themselves point out that the distinction between home and community settings does not fully capture the complexity of leisure experiences, since both home and community activities can take on individual or social significance, depending on the modalities and relationships that characterise them. This approach, therefore, helps to highlight how social aspects cannot be reduced to the setting where the activity is carried out, but must be understood in

² The study by Beart et al. (2001) analyses the dimension of sociality based on the distinction between activities in home-based settings and activities in community-based settings, as listed below (Beart et al., 2001, p. 135):

- Relaxing at home (e.g., watching television or listening to music);
- Being creative at home (e.g., painting, drawing or sewing);
- Improving things at home (e.g., making repairs, or taking care of animals and plants);
- Doing things at home (e.g., playing a board game or talking on the phone);
- Learning new things (e.g., library or college classes);
- Doing things with people (e.g., parties or shopping);
- Doing sports and exercise (e.g., walking or netball);
- Doing outdoor activities (e.g., picnics);
- Doing things for fun (e.g., cinema or theatre).

relation to the quality of interactions and the meaning they have for the person (Beart et al., 2001).

With regard to the dimension of investment, studies highlight lower participation levels in structured activities that require continuity (such as team sports) (Shields & Synnot, 2014), in favour of leisure activities that can be carried out at home and managed informally and independently, again linked to the possible involvement of family members primarily (King et al., 2003; Law et al., 2006; Bult et al., 2011; Coster et al., 2012; Kanagasabai et al., 2017; Robertson et al., 2018; Krieger et al., 2018). However, research shows that family members and caregivers recognise the importance of identifying structured forms of leisure in which people with disabilities can be involved, taking on a specific role, expressing their potential without feeling different from their peers without disabilities, and encouraging ongoing commitment (Armila et al., 2017; Mitchell et al., 2018; Steinhardt et al., 2021).

Moving on to present studies that analyse and compare leisure activities among people with and without disabilities, it is noted that, in general, the repertoire of the former group tends to be more limited and characterised by less variety, despite the fact that the preferences of the two groups are almost identical (Hoge & Dattilo, 1995; Shikako-Thomas et al., 2013; Cottini, 2024b). This evidence could be linked, firstly, to a more limited choice due to barriers that some activities present (Evcil, 2017; Melbøe & Ytterhus, 2017; Heister et al., 2023) and, secondly, to a lack of awareness of the options available (Evcil, 2017; Marques et al., 2021; Steinhardt et al., 2021; Aguilar-Carrasco et al., 2023).

In this regard, studies highlight how, even when people with disabilities have adequate time to devote to leisure activities, they do not always have adequate resources to translate this potential into meaningful experiences (Beart et al., 2001; Aitchison, 2003; Cook & Shinew, 2014; Pagán-Rodríguez, 2014; Myers &

Ravesloot, 2016; Marques et al., 2021; Shandra, 2021; Aguilar-Carrasco et al., 2023). This limited range of opportunities (Cottini, 2024b) echoes the distinction introduced by Aitchison (2003) between “time for leisure” and “leisure time” (p. 956). While “time for leisure” represents the availability of time to engage in leisure activities, “leisure time” reflects the actualisation of this time in specific forms and experiences that can be perceived as meaningful.

In addition, research highlights the risk that the choice of leisure activities is made by caregivers rather than by the person, leading to a pattern of activities “selected for, instead of by” (Rogers et al., 1998, p. 125). In detail, studies (Beart et al., 2001; Pagán-Rodríguez, 2014) show how an excessively essential and rehabilitative approach by the support network can lead families to favour health-oriented activities for the person with disability (e.g. swimming or physical exercise) at the expense of other forms of leisure activities which, although not directly related to physical health, are equally relevant to the person's wellbeing. At the same time, the choice of activities may be influenced by organisational and logistical requirements, especially in contexts such as residential centres, rather than by the interests of the individual, as already observed by Rogers et al. (1998). In the case of people with complex disabilities, this dynamic tends to intensify, with participation in leisure activities strongly influenced by external factors, such as the availability of support staff (Law et al., 2006; Heister et al., 2023; Mira-Aladrén et al., 2024).

In conclusion, research on the patterns of participation of people with disabilities in leisure allows us to identify critical issues affecting authentic and self-determined leisure experiences, opening up important pedagogical reflections that will be taken up again at the end of this chapter (Giaconi, 2015; Del Bianco, 2019; Giaconi & Del Bianco, 2025).

Having reconstructed the main forms and experiences of leisure in the lives of people with disabilities, we propose to further explore the research that has investigated its meanings and impacts on the experiences of people with disabilities.

5. Meaning and impact of leisure for people with disabilities and their caregivers

Following on from what was outlined in the first chapter with regard to the central role played by the subjective dimension in the experience of leisure (Chick, 2016; Tokarski & Zarotis, 2020), it is now necessary to further investigate the meanings and impacts of this dimension for people with disabilities and their caregivers. Such studies, in fact, allow us to understand the value of leisure in the experience of children, adolescents and adults with disabilities, opening up significant reflections for the promotion of inclusive processes (Powrie et al., 2019).

With regard to this area of research, scientific literature emphasises, first of all, how the meanings and impacts of leisure as perceived by people with disabilities and their caregivers should be considered in light of the influence of the leisure time system and the patterns of participation that are realised (Aitchison, 2003, 2009; Boucher et al., 2010; Badia et al., 2011a, 2013a; Dattilo et al., 2015; Marques et al., 2021). In fact, although studies show that leisure related needs, desires and priorities of people with disabilities are similar to those of their peers without disabilities (Aitchison, 2000; Stumbo et al., 2011; Evcil, 2017), numerous factors can negatively influence their expectations. Specifically, Cole and colleagues (2018) highlight how the experience of limitations to participation in certain leisure contexts—due to poor accessibility—can lead people to lower their expectations or feel less motivated to participate, even when the activity is one of their interests. In this regard, leisure habits themselves (expressed in participation patterns) can

influence desires and aspirations: the degree of heterogeneity, frequency and involvement in leisure activities, according to researchers, has a significant impact on the motivation to explore new forms and experiences of leisure (Aitchison, 2003, 2009; Boucher et al., 2010; Badia et al., 2011a, 2013a; Dattilo et al., 2015; Marques et al., 2021).

Overall, studies that explore the meaning of leisure in the experience of people with disabilities highlight how this dimension can be a significant source of wellbeing, socialisation and personal development (Beart et al., 2001; Hudson et al., 2018; Mitchell et al., 2018; Haythorne et al., 2022). These benefits are accentuated in the pursuit of forms of serious leisure (Stebbins, 2004), recognised by Aitchison (2003) as a potential vehicle for promoting self-esteem and a sense of fulfilment, especially in the absence of employment (Rogers et al., 1998).

In this regard, according to studies, leisure can be perceived as a potential space for self-expression and the affirmation of one's preferences (Labbé et al., 2019). Specifically, this impact would be linked to participation in personally chosen leisure contexts and activities that are perceived as important and consistent with the person's interests (Stacey et al., 2019; Heister et al., 2023; Iso-Ahola & Baumeister, 2023), which can also take on a protective role (Cottini, 2024b). In this sense, studies recognise that solitary leisure activities can also be equally significant for personal wellbeing (Cottini, 2024b). Conversely, leisure activities chosen by caregivers may not meet the person's interests and preferences, negatively affecting their sense of motivation, self-efficacy and self-esteem (Barr & Shields, 2011; Badia et al., 2011a; Armila et al., 2017). According to Mitchell et al. (2018), these aspects may also depend on the presence of specific inhibitory elements in the chosen activity that have not been adequately addressed (consider, for example, how one's fear of dogs may discourage the desire to go for walks).

According to research (Hawkins, 1987; Rogers et al., 1998; Beart et al., 2001), the significance of leisure as a source of personal fulfilment is perceived throughout the whole life span, allowing us to recognise how this dimension can support ageing through experiences and contexts that can continue to give meaning to one's life, offering continuous opportunities to increase personal knowledge and skills.

Alongside this evidence, scientific literature highlights how leisure can take on significance in terms of social inclusion, being perceived by people with disabilities and their caregivers as a privileged space for increasing their sense of community belonging and fostering creation of interpersonal networks (Rose, 1993; Devine, 2003; Badia et al., 2013b; Mitchell et al., 2018; Labbé et al., 2019). In this regard, Aitchison (2009) considers social leisure experiences to be central in the promotion of wellbeing of people with disabilities. This aspect would also have an indirect impact which is aimed at building a culture of inclusion in leisure and overcoming negative personal attitudes (Shields & Synnot, 2016; Mitchell et al., 2018). In this context, it is also possible to refer to what has already been said about the use of devices such as smartphones, tablets and PCs for digital leisure experiences: studies highlight how these devices are perceived by people with disabilities and their caregivers as useful resources not only for solitary entertainment, but also for facilitating a sense of social belonging and the building of interpersonal relationships (Aitchison, 2009; Rojas de Francisco et al., 2016; López-Sintas et al., 2017; Steinhardt et al., 2021).

In light of the above, studies show how people with disabilities and their caregivers perceive the intrinsic value of leisure, interpreting it as a “potential vehicle through which to enhance well-being” (Aitchison, 2003, p. 956). According to scientific research, the aspects mentioned above underline the centrality of subjective experience in determining the meaning and impact that leisure can have for each individual, raising the need to promote “person-centred recreational

activities” (Haythorne et al., 2022, p. 357), capable of enhancing personal abilities, preferences and aspirations (Armila et al., 2017; Mitchell et al., 2018). In this regard, studies highlight the importance of promoting awareness of opportunities for choice, decision-making skills and, from a systemic point of view, extended access to leisure experiences (Rogers et al., 1998; Goussot, 2009; Shikako-Thomas et al., 2013; Steinhardt et al., 2021), emphasising how the subjective value of a specific activity can vary at both the intrapersonal and interpersonal levels (Rogers et al., 1998).

6. Pedagogical reflections

The insights gained throughout the previous three sections of this chapter allow us to identify key aspects for our special pedagogical reflection, highlighting significant opportunities, critical issues and challenges for the care provision for people with disabilities in relation to leisure, as we will illustrate below.

The reflections proposed by studies on leisure and disability allow us to detail how the right to leisure for people with disabilities can be approached through an ecosystemic perspective (Bronfenbrenner, 2000; Morán et al., 2023), offering a broad view of the factors that, at the micro, meso and macro levels, can promote or hinder active participation (Giacconi, 2015). In detail, what has been reconstructed prompts us to consider individual relationships and characteristics, relationships between services, institutions and local realities, as well as policies and cultural representations, promoting an in-depth reading of the various elements that contribute to the promotion of inclusive processes (d'Alonzo & Giacconi, 2024) within the dimension of leisure.

Firstly, it is important to refer to the bio-psycho-social perspective (WHO, 2001; Giaconi, 2015), within which the factors identified in Leisure Studies can be reinterpreted as an expression of the dynamic relationships between the individual and leisure environments. For example, previous studies (King et al., 2003; Boucher et al., 2010; Steinhardt et al., 2021) show how the elements of the leisure time system can be interpreted, according to the logic of the ICF (WHO, 2001, 2007), in terms of facilitators—when they encourage involvement—or barriers, when they limit participation. This perspective guides educational care provision and inclusive planning, focusing on the link between individual characteristics and contexts of experience (d'Alonzo & Giaconi, 2024; Giaconi & Del Bianco, 2025). Such a direction is expressed in what Medeghini (2006) defines as the *ecological perspective of inclusion*, which stresses the interdependence between the person and the environments they live in (Giaconi, 2015; Caldin, 2022). In this pedagogical direction, the elimination of obstacles and barriers is not only a compensatory action, but becomes an intentional act of welcoming diversity, capable of guaranteeing equal opportunities for participation and building truly inclusive environments (Bocci, 2020). This approach, therefore, must find concrete expression in the context of leisure, where access to sporting, artistic, cultural or recreational activities constitutes a privileged area for socialisation and the development of skills, wellbeing and self-determination (Badia et al., 2013b; Cottini, 2024b).

In line with these reflections, studies on leisure patterns return to the concept of participation as the result of dynamic interactions between personal motivations and preferences, habits and social roles, skills and contextual factors (Marques et al., 2021; Haythorne et al., 2022; Heister et al., 2023), aligning with its interpretation in terms of involvement in life situations (WHO, 2001). This perspective leads to the possibility of situating the leisure activities pursued by people with disabilities

in light of the intertwining between personal and environmental factors that influence their choices and levels of participation, highlighting the need to rethink leisure forms and experiences as constitutive dimensions of the existential experience (Rimmer et al., 2004; Imms et al., 2016a; 2017; Di Marino et al., 2018; Heister et al., 2023). From this perspective, the uniqueness of the experience of people with disabilities is a fundamental resource for guiding educational strategies and project solutions capable of generating inclusive contexts (Canevaro, 1986). Therefore, the promotion of full and effective participation in leisure contexts (UN, 2006) highlights, from a pedagogical point of view, how participation is not simply a secondary objective, but represents “the powerful lever of inclusion, [...] the starting point” (Pinnelli et al., 2024, p. 349), that is to say the driving force through which it becomes possible to recognise and value diversity, generating equity and real opportunities for participation.

In line with this reflection is the issue of accessibility, widely referred to in studies as an essential condition for guaranteeing the right to active participation and social inclusion (Giaconi & Del Bianco, 2025). Accessibility, in fact, is presented not only as a technical or logistical issue, but rather as a true pedagogical principle and inviolable right (WHO, 2001; UN, 2006; Morán et al., 2023)—a reading which will be reprised in the experimental part of this work—which directly challenges the various stakeholders involved: from policy makers, called upon to define inclusive regulatory and policy frameworks, to suppliers of goods and services, responsible for providing accessible environments, to professionals and scholars, committed to developing practices, tools and knowledge that make this right effective (Gray et al., 2008; Longo et al., 2020; Haythorne et al., 2022; Giaconi et al., 2024a). The creation of an accessible and inclusive leisure system also highlights the importance of information networks. In fact, studies show that access to clear, up-to-date and reliable information on accessible leisure services and

contexts is a decisive factor in making informed choices, preventing a lack of knowledge from becoming a barrier to participation (Cole & Morgan, 2010; Shields et al., 2012; Shields & Synnot, 2014). Information, therefore, is not a marginal aspect, but rather a concrete resource linked to the possibility of taking advantage of the opportunities offered by the territory (Giacconi & Del Bianco, 2025). In this regard, we highlight the vision of an inclusive community capable of enhancing the circulation of information and knowledge, fostering a constructive relationship between the person with disability, their family and the local area, and promoting a perspective of shared educational and social responsibility (Auer et al., 2022).

Another element that emerges from the studies we mapped concerns the family dimension, which is one of the primary spheres that can influence the choices and opportunities for participation in leisure activities for people with disabilities. Scientific literature highlights the decisive role of parents and siblings in promoting the development of autonomy in leisure settings, offering practical, motivational and emotional support (Heah et al., 2007; Anaby et al., 2013; Di Marino et al., 2018; Krieger et al., 2018; Wright et al., 2019; Marques et al., 2021; Steinhardt et al., 2021). In this perspective, Haythorne and colleagues (2022) emphasise the value of proxies as mediators of the leisure experience, not only to ensure access to activities, but also as an emotional resource capable of encouraging and supporting involvement. Specifically, Krieger et al. (2018) describe the role of parents as a real “anchoring function” (p. 7), claiming how they represent a fundamental stimulus in opening up to the experimentation of new recreational experiences, in line with other studies (Shikako-Thomas et al., 2013; Shields & Synnot, 2014). At the same time, the extended family network can play a supporting role in managing leisure activities as well, helping to sustain the participation of the person with disability (Di Marino et al., 2018; Longo et al., 2020; Marques et al., 2021). From a pedagogical point of view, this evidence highlights the need to enhance the potential

of the family as an educational resource, but also to critically reflect on the risks that neglectful or, conversely, overly protective attitudes can entail. Such dynamics can, in fact, translate into barriers to participation, limiting the possibility for people with disabilities to enjoy meaningful leisure experiences (Shields & Synnot, 2014; Evcil, 2017; Marques et al., 2021). Furthermore, it should be remembered that socio-economic conditions, parents' work commitments and the needs of other family members—particularly brothers and sisters—are factors that directly influence participation in leisure, posing complex challenges in supporting such experiences at the family level (King et al., 2003; Badia et al., 2011a; Armila et al., 2017; Mitchell et al., 2018; Steinhardt et al., 2021). For these reasons, scientific literature highlights the need to accompany and support families in recognising leisure contexts as important spaces for growth and self-determination (Giaconi, 2015; Caldin & Giaconi, 2021).

In line with the reflection on the role of the family, another element that deserves attention is the influence of the attitudes of those involved in leisure experiences in various capacities (Boucher et al., 2010; Marques et al., 2021; Steinhardt et al., 2021). While the family represents a primary anchor and support, the quality of social relationships and the relational climate that is built in leisure contexts are decisive factors in promoting or limiting participation as well. Numerous studies show that positive attitudes on the part of peers, especially in social leisure situations, are one of the main facilitators of participation, as they allow meaningful bonds to be formed, personal motivation to be strengthened and the risk of isolation to be reduced (Boucher et al., 2010; Jaarsma et al., 2015; Armila et al., 2017; Hudson et al., 2018; Marques et al., 2021; Steinhardt et al., 2021).

At the same time, the role of educational, sports and recreational staff involved in leisure contexts takes on pedagogical significance. The lack of inclusive training for operators can, in fact, translate into discriminatory or negligent attitudes,

generating invisible barriers that hinder participation, as they do not allow the real needs of the person with disability to be understood or their potential to be recognised (Shields et al., 2012; Shields & Synnot, 2014; Armila et al., 2017; Marques et al., 2021). Conversely, properly trained personnel and support staff are considered as key facilitators, especially when people with disabilities express a growing desire for independence and a willingness to try leisure activities without receiving family support (Boucher et al., 2010; Shields et al., 2012; Steinhardt et al., 2021; Haythorne et al., 2022; Hurd et al., 2023). In this regard, professional training is a “crucial channel for inclusive implementation” (Giaconi et al., 2024b, p. 46), as it not only empowers individual operators, but also guides the organisations that offer leisure services, promoting significant systemic change towards inclusive approaches. Such a pedagogical perspective requires us to question the organisational culture that these services promote: a culture based on separative models and on activities exclusively dedicated to people with disabilities risks, as noted by Beart et al. (2001), to reinforce exclusionary perceptions and attitudes, fuelling processes of marginalisation rather than inclusion. Conversely, organisations that promote truly inclusive practices can transform leisure contexts into spaces for social learning, empowerment and the exercise of citizenship, laying the foundations for authentic and lasting involvement (Giaconi & Del Bianco, 2025).

Furthermore, personal choice in creating meaningful leisure experiences appears to be of particular importance (Armila et al., 2017; Mitchell et al., 2018), invoking self-determination as a pedagogical principle and dynamic process aimed at enabling the full realisation of individual identity (Shogren, 2013; Del Bianco, 2019). For these reasons, according to scientific literature, the promotion of inclusive processes in leisure should focus on personal desires and expectations in order to foster higher levels of life satisfaction (Hawkins et al., 2004; Badia et al.,

2013b; Song, 2021; Haythorne et al., 2022), promoting interventions and supports capable of sustaining experiences that respond to personal desires and attitudes (Rose, 1993; Del Bianco, 2019; Haythorne et al., 2022; Cottini, 2024a, 2024b; Giaconi & Del Bianco, 2025). Such an alignment would allow the dimension of leisure to represent an important source of personal fulfilment and wellbeing throughout life, supporting ageing through meaningful experiences and contexts while offering a constructive and forward-looking vision (Rogers et al., 1998). In this regard, Cottini (2024b) highlights the centrality of acquiring leisure skills as specific competencies that can promote a richer and more autonomous management of leisure. Leisure time, therefore, can foster the construction of existential trajectories based on the full protagonism of the person (Caldin & Giaconi, 2021; Giaconi & Del Bianco, 2025), offering concrete opportunities for experimentation and self-determination for people with disabilities (Cottini, 2024b).

Overall, the studies we examined allow us to recognise numerous pedagogical aspects related to the inclusion of people with disabilities in leisure (UN, 2006; WLO, 2020; Byrne, 2024; Condie, 2024; Giaconi et al., 2024a; Giaconi & Del Bianco, 2025). In highlighting how this dimension can constitute a privileged space for promoting self-realisation, active participation and social justice (Coalter, 1997; Aitchison, 2009; Macbeth, 2010; Iso-Ahola & Baumeister, 2023), its centrality in the care provision for people with disabilities and their families is highlighted (Giaconi, 2015; Giaconi & Del Bianco, 2025).

In light of these considerations, it is important to emphasise that the choice of conceptual and operational tools with which to explore the dimension of leisure in the experience of people with disabilities is decisive in the preparation of policies, the design of supports and interventions, and the development of research and innovation pathways aimed at promoting equal opportunities for participation, influencing the effectiveness and quality of the outcomes of these actions. In this

regard, as Canevaro (2009) points out, the adoption of a conceptual framework is not limited to theory but has significant practical implications, transforming theoretical aspirations into concrete actions. For these reasons, there is a need to adopt an epistemological framework capable of encompassing the plurality of pedagogical issues related to leisure, allowing this dimension to be conceptualised and operationalised with the aim of implementing projects, supports and interventions aimed at an effective care provision for people with disabilities.

In response to this need, we propose an interpretation of this dimension within the theoretical lines that unfold the Framework of Quality of Life (Schalock & Verdugo Alonso, 2002, 2006; Giaconi, 2015), allowing us to trace in-depth horizons of meaning in the care provision for people with disabilities, also with reference to free time pursuits (Aitchison, 2003, 2009; Giaconi, 2015; Melbøe & Ytterhus, 2017; Giaconi et al., 2024a). In the following chapter, therefore, the connections between leisure and Quality of Life will be reconstructed, exploring the validity of this theoretical framework for conceptualising and operationalising leisure in the construction of inclusive projects and trajectories for people with disabilities (Felce & Perry, 1995; WHO, 1995; Iso-Ahola & Park, 1996; Cummins, 1997a; MacNeil & Anderson, 1999; Schalock & Verdugo Alonso, 2002, 2006; Giaconi, 2015; Del Bianco, 2019; Giaconi & Del Bianco, 2025).

7. Summary and implications

This chapter has allowed us to explore in greater depth—starting from the areas of investigation presented in the first chapter—studies relating to the leisure experiences of people with disabilities (Aitchison, 2000, 2009), with the aim of identifying those aspects which, according to a special pedagogical interpretation,

allow us to define and discuss the main opportunities, critical issues and challenges for the leisure related care provision for people with disabilities.

Firstly, it was possible to reconstruct the theme of the participation of people with disabilities within Leisure Studies, highlighting the need to adopt an approach capable of offering a deeper understanding of this dimension, so as to guide research paths aimed at promoting inclusion, active participation and equity (Aitchison, 2009).

Starting from this framework, studies that explore the experiences of people with disabilities and their caregivers in relation to the leisure time system were analysed, highlighting how physical, cultural and organisational factors can have a decisive impact on the possibility of participating in leisure (Boucher et al., 2010; Shields & Synnot, 2016; Steinhardt et al., 2021). In this direction, it has been possible to highlight aspects such as the value of policies and welfare systems capable of providing concrete support, the importance of providing accessible equipment and settings, the role of technology in supporting leisure experiences, the centrality of networks and information support, and the need to promote inclusive knowledge and skills among leisure operators and professionals (Aitchison, 2003; Boucher et al., 2010; Wright et al., 2019; Steinhardt et al., 2021).

Proceeding with the analysis, we investigated the patterns of leisure participation pursued by people with disabilities, examining studies aimed at mapping the main and most frequent forms and experiences of leisure in their daily lives (Buttimer & Tierney, 2005; Badia et al., 2013a; Ullenhag et al., 2014; Shandra, 2021). Overall, this analysis revealed a general tendency towards passive, individual and casual forms of leisure, sometimes linked to the home environment, characterised by reduced variety and social interactions limited mainly to family members and caregivers (Badia et al., 2013a; Pagán-Rodríguez, 2014; Heister et al., 2023). In addition to this evidence, it was found that many recreational opportunities are still

located in separate or special contexts and are not the result of an autonomous choice on the part of the person (Rogers et al., 1998; Aitchison, 2003; Melbøe & Ytterhus, 2017).

Subsequently, the analysis moved on to the meanings and impacts of leisure recognised by people with disabilities and their caregivers, which highlighted how this dimension can be a crucial resource for wellbeing, socialisation and personal development (Powrie et al., 2019; Haythorne et al., 2022). The studies examined show that the needs and desires for leisure among people with and without disabilities are almost identical, highlighting the centrality of this dimension in promoting the expression of one's interests, the development of a sense of community belonging, and the centrality of subjective experience in promoting leisure activities perceived as meaningful (Aitchison, 2003).

Finally, in the last paragraph, it was possible to re-examine the findings of the studies, raising key issues for reflection in Special Pedagogy and identifying key trajectories to inform the care provision for people with disabilities in relation to leisure. Firstly, it was highlighted how the studies referred to allowed us to explore the right to leisure for people with disabilities from an ecosystemic and bio-psycho-social perspective (WHO, 2001), orienting inclusive planning on the basis of the interdependence between the person and the leisure contexts they experience (Giaconi, 2015; Bocci, 2020; Caldin, 2022; Morán et al., 2023). The crucial role of accessibility, understood not only as a technical requirement but also as a pedagogical principle, has also been highlighted, as well as the importance of information networks, family, attitudes, professional training and self-determination processes as crucial nodes for promoting opportunities for inclusive leisure participation oriented towards personal wellbeing (Caldin & Giaconi, 2021; Haythorne et al., 2022; Giaconi et al., 2024a; Pinnelli et al., 2024). These reflections therefore highlight the pedagogical value of leisure in the care provision for people

with disabilities, defining this sphere as a generative dimension for the promotion of inclusive processes and meaningful projects (Giaconi & Del Bianco, 2025).

Given the plurality of aspects that have emerged, it is therefore necessary to adopt conceptual and operational tools capable of effectively guiding the planning of the dimension of free time in the care provision for people with disabilities. With this in mind, the third chapter aims to explore this issue in greater depth, highlighting how free time cannot be considered as a marginal area, but rather as an element which is closely linked to the overall wellbeing of the person. Therefore, the following chapter will be dedicated to reconstructing the link between leisure and the Framework of Quality of Life, mapping the main contributions of scientific literature on this topic (Felce & Perry, 1995; WHO, 1995; Iso-Ahola & Park, 1996; Renwick & Brown, 1996; Cummins, 1997a; MacNeil & Anderson, 1999; Schalock & Verdugo Alonso, 2002, 2006; Giaconi, 2015; Del Bianco, 2019; Giaconi & Del Bianco, 2025).

3. Quality of Life and leisure in the care provision for people with disabilities

1. Conceptual coordinates

The reconstruction of scientific literature referring to the leisure experiences of people with disabilities has allowed us to highlight numerous dimensions that are relevant from a pedagogical point of view. According to researchers, leisure experiences contribute to generating benefits for various aspects of everyone's life, while, at the same time, raising significant challenges in the construction of authentic and inclusive experiences (Aitchison, 2003, 2009; Badia et al., 2013b; Giaconi, 2015; Melbøe & Ytterhus, 2017; WLO, 2020). In this sense, Neulinger (1981) states that leisure “is not just a component of quality of life, but the very essence of it. [...] the guideline needed for any decision relating to the quality of life” (p. 66).

Referring back to what was highlighted in the previous chapter, consequently, there is a need to consider leisure not only as a residual moment of daily experience, but as an integrated and central dimension in people's lives, carrying profound meanings and capable of influencing the overall wellbeing of individuals and communities (Aitchison, 2003, 2009; Badia et al., 2013b; Giaconi, 2015; Melbøe & Ytterhus, 2017; Tokarski & Zarotis, 2020; Iso-Ahola & Baumeister, 2023; Cottini, 2024b). In this direction, the structuring of interventions and supports in

the area of leisure must aim to ensure that each person can enjoy meaningful and fulfilling experiences in their free time (UN, 2006; Aitchison, 2003, 2009; Badia et al., 2013b; Giaconi, 2015; Melbøe & Ytterhus, 2017; Shogren et al., 2022; Del Bianco et al., 2024; Giaconi et al., 2024a).

In light of these considerations, it is necessary to adopt a conceptual and operational framework capable of encompassing the pedagogical meanings associated with leisure. Therefore, this chapter aims to investigate this dimension within the theoretical Framework of Quality of Life (Schalock et al., 1989; Badia et al., 2013b; Giaconi, 2015; Giaconi & Del Bianco, 2025). In detail, the chapter is composed of three main sections. Firstly, Quality of Life will be presented as a theoretical Framework and central resource for the care provision for people with disabilities (Schalock & Verdugo Alonso, 2002, 2006; Giaconi, 2015), in order to define the main theoretical coordinates of this construct. In line with these references, we will then proceed with the presentation of leisure within Quality of Life, illustrating the main proposals of QoL models advanced by researchers, and the related conceptualisations of leisure that such models include (Schalock et al., 1989; WHO, 1995; Felce & Perry, 1995; Renwick & Brown, 1996; Cummins, 1997a; Schalock & Verdugo Alonso, 2002, 2006). Finally, we will highlight the specificities and similarities between the models presented in order to explore the theoretical and practical perspectives relating to leisure within the construct of Quality of Life.

2. Quality of Life as a theoretical Framework

Quality of Life (QoL) is a complex conceptual paradigm that reflects the overall level of wellbeing experienced by each person, aiming to consider multiple areas

relevant to it, both in terms of objective living conditions and in light of personal perceptions and expectations (Schalock & Verdugo Alonso, 2002; Verdugo Alonso et al., 2012; Giaconi, 2015; Cottini et al., 2016; Verdugo Alonso & Schalock, 2024).

The theoretical construct of Quality of Life has gained increasing relevance both in academic research and in various application contexts, placing itself at the heart of theories and practices in the field of Special Pedagogy (Giaconi, 2015; Giaconi & Del Bianco, 2018). In this sense, QoL represents a central conceptual horizon both in the assessment of needs and desires and in the planning of care provision for people with disabilities, allowing for the promotion of inclusive processes across all life contexts (Felce, 1997; Schalock & Verdugo Alonso, 2002; Schalock, 2004; Verdugo Alonso et al., 2012; Giaconi, 2015). At the same time, the literature on the subject highlights how the construct of QoL, in its ecosystemic articulation (Verdugo Alonso & Schalock, 2024), constitutes an important frame of reference for the adoption and promotion of social policies aimed at protecting the rights of people with disabilities (UN, 2006), as well as for defining key objectives in relation to the impact of care provision services (Felce, 1997; Giaconi, 2015).

For these reasons, the epistemological framework of Quality of Life represents a central resource for planning the care provision for people with disabilities and the implementation of services to support them, allowing meaningful trajectories to be traced throughout their entire life course and across all contexts (Felce, 1997; Verdugo Alonso et al., 2012; Giaconi, 2015).

As highlighted by Giaconi (2015), scientific literature offers multiple theoretical perspectives and procedures for analysing this construct, which relate to different disciplinary and epistemological frameworks. The widespread scientific interest in this paradigm has given rise to a plurality of definitions and assessment tools (Cummins, 1997a; Giaconi, 2015; Gómez et al., 2015; Schalock & Verdugo Alonso, 2024), generating a wide-ranging debate on the definition and application

of the QoL construct that is still ongoing in the contemporary scenario (Cummins, 1997a; Brown & Brown, 2003; Giacon, 2015; Schalock & Verdugo Alonso, 2024).

In this context, scholars have proposed interpretations aimed at conceiving and evaluating QoL on the basis of objectively measurable aspects (such as physical health or income) (Gómez et al., 2015; Schalock & Verdugo Alonso, 2024) or, conversely, on the basis of subjective aspects and meanings (such as satisfaction, personal aspirations, values, and so on) (Schalock et al., 1989). Over the last 30 years, in response to the need to define the nature of this construct, the scientific community has moved towards adopting synthetic approaches, aimed at considering both objective and subjective aspects, placing QoL in more articulated and complex frameworks of meaning (Brown, 1989; Giacon, 2015; Verdugo Alonso & Schalock, 2024). These proposals for systematisation adopt a multidimensional perspective (Brown, 1989; Felce & Perry, 1995; Cummins, 1997b; Schalock & Verdugo Alonso, 2002, 2006), aimed at defining Quality of Life on the basis of specific conceptual dimensions that are distinct but complementary (Brown & Brown, 2003; Giacon, 2015; Del Bianco, 2019).

An initial approach to synthesising objective and subjective components can be found in Brown's analysis (1989), which proposes the consideration of both contextual and personal factors in relation to the Quality of Life of people with disabilities (Giacon, 2015) (Table 1).

Table 1 – Relevant aspects for Quality of Life (Adapted from Brown, 1989))

Objective aspects	Subjective aspects
• Physical environment • Nutrition and health • Training and concrete supports	• Personal perceptions • Expectations • Satisfaction

These trajectories therefore promote the adoption of a more articulated and in-depth vision of QoL, nurturing a sensitivity centred on the person and their expectations but at the same time attentive to the contextual factors belonging to the environments in which they are inserted (Schalock & Verdugo Alonso, 2002, 2006; Giaconi, 2015). By adopting such a global vision, it would therefore be possible to identify the most suitable strategies and solutions to promote wellbeing and personal development at both the individual and macro-systemic levels (Schalock & Verdugo Alonso, 2002; Giaconi, 2015).

The multiplicity of visions and operationalisations with regard to QoL finds common ground in the identification of certain key principles shared by the scientific community (Schalock et al., 2002, p. 460), according to which Quality of Life:

1. Is composed of those same factors and relationships for people with intellectual disabilities that are important to those without disabilities;
2. Is experienced when a person's needs and wants are met and when one has the opportunity to pursue life enrichment in major life settings;
3. Has both subjective and objective components, but is primarily the perception of the individual that reflects the quality of life he/she experiences;
4. Is based on individual needs, choices, and control;
5. Is a multidimensional construct influenced by personal and environmental factors, such as intimate relationships, family life, friendships, work, neighbourhood, city or town of residence, housing, education, health, standard of living, and the state of one's nation.

According to these key principles, we can infer that: 1) Quality of Life refers to aspects, attributes and processes relevant to the lives of all people, establishing itself as a universal concept; 2) Quality of Life has a personal value and takes on a unique meaning based on personal choices and needs; 3) Quality of Life is constructed and negotiated on the basis of individual priorities and perceptions; 4) Quality of Life

is a coherent construct composed of interconnected aspects; 5) Quality of Life is a constantly changing phenomenon, which varies at the interpersonal and intrapersonal levels (Brown & Brown, 2003; Giacon, 2015).

In this regard, the scientific community's reflection on QoL as a multidimensional construct is linked to the need to consider a plurality of domains that are relevant to it, recognising how the identification of needs, expectations, objectives and/or support can be applied to specific areas of each person's life, while maintaining a fundamental holistic view (Schalock et al., 2010; Giacon, 2015). Taken together, these domains provide a comprehensive view of the wellbeing experienced by each person, while also allowing for the observation and analysis of specific aspects depending on the purpose of its application and the interventions or supports provided (Schalock & Verdugo Alonso, 2002; Brown & Brown, 2003; Giacon, 2015).

The articulation of Quality of Life as a multidimensional construct follows, from a conceptual point of view, the methodological proposal of Schalock and Verdugo Alonso (2002), which combines the concept of *domain* with that of *indicator* as fundamental elements of the Framework. While domains coincide with the different areas relevant to each person's life (Giacon, 2015), indicators allow for a deeper understanding of each domain by illustrating perceptions, behaviours or conditions specific to each domain (Schalock & Verdugo Alonso, 2002, 2006). In the field of research on QoL models, scholars have subsequently proposed the concept of *descriptor* as a tool for operationalising and specifying each domain and indicator (Giacon, 2015; Giacon & Rodrigues, 2018). In this sense, descriptors allow us to identify “observable behaviours or situations relevant to the context of reference” (Giacon, 2015, p. 23). Thus, the transition between domains, indicators and descriptors reflects a progressive movement from the abstract definition of the central dimensions of QoL to the concrete identification of circumstances and

conditions in which it is embodied, paving the way for the structuring and application of measurement tools, supports and targeted interventions (Schalock & Verdugo Alonso, 2002, 2006; Giaconi, 2015).

In parallel with the identification of the multiple dimensions related to the construct of QoL through the construction of multidimensional models, scholars have focused on the detection of areas that cut across these same domains, known as transversal areas (Giaconi, 2015; Gómez et al., 2015). Following these trajectories, the construct of Quality of Life has become a central resource for the construction of life paths oriented towards the wellbeing of people with disabilities, guiding the identification and monitoring of educational interventions, strategies and supports for inclusion (Giaconi, 2015).

In summary, it can be said that Quality of Life is a multidimensional phenomenon applicable to any person, consisting of “a plurality of relevant areas, both subjective and objective” (Giaconi, 2015, p.19), responding to personal characteristics and environmental factors (Schalock et al., 2010; Giaconi, 2015). The importance and value assigned to these areas, which are identical for everyone, varies from person to person, just as it can change over time and across individual life contexts (Giaconi, 2015). The operationalisation of this construct, which allows specific descriptors to be derived from the relevant areas, has made it possible to develop assessment tools capable of measuring QoL in both individual and systemic terms (Schalock et al., 2010). Over time, scientific research has developed assessment procedures aimed at detecting both the level of Quality of Life experienced by the individual and that of the context of services, institutions and policies (Verdugo Alonso & Schalock, 2024).

Having established these defining elements, for the purposes of this discussion, we will now present the theoretical approaches to Quality of Life most appreciated

by the scientific community, unfolding the conceptualisation of leisure that they propose as an inherent element.

3. Leisure in Quality of Life

The recognition of the plurality of dimensions and contexts that impact personal development and wellbeing—conceptualised within Quality of Life as relevant domains or areas—has led the scientific community to include leisure among the central elements of this Framework. As we will see, its relevance emerges above all in relation to the possibility of guaranteeing high levels of Quality of Life for people with disabilities, considering how the dimension of leisure has often been marginalised and interpreted in terms of a container for therapeutic or rehabilitative interventions (Giaconi, 2015; Cottini, 2024b). In this sense, rethinking leisure as an opportunity and a right for QoL means focusing on the promotion of inclusive pathways in areas such as sports, participation in cultural life or entertainment (Cummins, 1997b; Schalock & Verdugo Alonso, 2002; Giaconi, 2015). Accordingly, Quality of Life allows us to frame leisure both in relation to personal needs and aspirations and in relation to contextual factors, thus offering a useful interpretation to guide educational planning and care, ensuring quality outcomes (Schalock & Verdugo Alonso, 2002; Giaconi, 2015).

In this perspective, as we will explore in more detail, the adoption of the Quality of Life Framework offers useful trajectories for conceptualising leisure, allowing us to highlight several key aspects: its relevance for every person, with or without disabilities; the dual perspective through which it can be observed, objective and subjective; the connections with the core elements of QoL, such as social relationships and material wellbeing; the centrality of the person in the process of

defining and attributing meaning (person-centred aspect); and, at the same time, the influence exerted by social, cultural and environmental contexts that condition the possibilities for its pursuit (context-oriented aspect).

In light of the above, the following paragraphs will focus on analysing the main conceptual models of Quality of Life proposed in the literature (Conner, 2016), with the aim of exploring the different perspectives through which the role of leisure in QoL has been conceptualised. In particular, following a chronological reconstruction, the models developed by Schalock, Keith and Hoffman (1989), the World Health Organisation (1995), Felce and Perry (1995), Renwick and Brown (1996), Cummins (1997) and Schalock and Verdugo Alonso (2002, 2006) will be presented and discussed. For each model, the scientific assumptions, salient features and implications they offer for understanding and enhancing leisure within the construct of Quality of Life will be highlighted.

3.1 Leisure in Schalock et al.'s first proposal

The studies conducted by Schalock and colleagues (1989, 1990) focus on defining the concept of Quality of Life and how to measure it (Schalock, 1991). In this sense, the research carried out led to the development, validation, revision and standardisation of the Quality of Life Questionnaire (Schalock et al., 1990), intended as a tool for measuring QoL in the form of a questionnaire consisting of 40 items. The structure of the tool is based on the identification of four empirically derived dimensions, illustrated in Table 2 (Schalock et al., 1989; Schalock, 1990, 1991):

Table 2 – Key dimensions in the proposal by Schalock and colleagues (Adapted from Schalock et al., 1989)

Domain	Meaning
<i>Satisfaction</i>	satisfaction of needs and desires and consequent gratification, pursuit of wellbeing through personal experiences
<i>Productivity</i>	the opportunity to contribute to the collective wellbeing by offering personal resources through work or other means
<i>Empowerment</i>	the opportunity to exercise control over one's environment and make active decisions
<i>Social Belonging</i>	the opportunity to actively participate in community life, enjoy the same resources as people without disabilities, and build social bonds within the community

Researchers recognise the central importance of the environment in which a person lives and the support offered to ensure and promote growth, personal development and wellbeing, promoting a substantial rethinking of the concepts of health and disability that anticipates what will later be recognised according to the bio-psycho-social approach to disability (Schalock et al., 1989, 1990; Schalock, 1990, 1991; WHO, 2001, 2007). To ensure good levels of *Satisfaction*, *Empowerment*, *Productivity*, and *Social Belonging*, the authors recognise the need to build contexts that they define with the expression “wholesome environments” (Schalock, 1991, p. 15), which have three essential qualities: 1) they offer opportunities; 2) they contribute to wellbeing; 3) they promote stability (Schalock, 1991).

In this framework, leisure emerges as an aspect which is inherent in the first quality of such wholesome environments. Specifically, according to the authors, the promotion of QoL, sensitive to the construction of wholesome environments, involves the need and challenge of offering concrete opportunities of various kinds, including leisure ones (Schalock et al., 1990). Leisure, therefore, becomes a resource to be guaranteed through the structuring of integrated settings, supporting personal growth and wellbeing (Schalock et al., 1990; Schalock, 1991).

The emphasis placed by the authors on promoting QoL in relation to people with disabilities through the structuring of adequate support in the context also highlights the link between leisure and Quality of Life as a vector for promoting, specifically, social wellbeing (Schalock, 1991). In this sense, among the objectives that are considered functional to an increase in QoL according to the authors, they identify (Schalock & Kiernan, 1990; Schalock, 1990, 1991):

- The promotion of access to the community, including leisure services and facilities;
- The development of basic skills, including those necessary for social leisure activities.

In light of the above, according to Schalock and colleagues (1989, 1990), access to leisure opportunities in inclusive settings is a key resource for promoting social participation and a sense of belonging to a community (Figure 1).

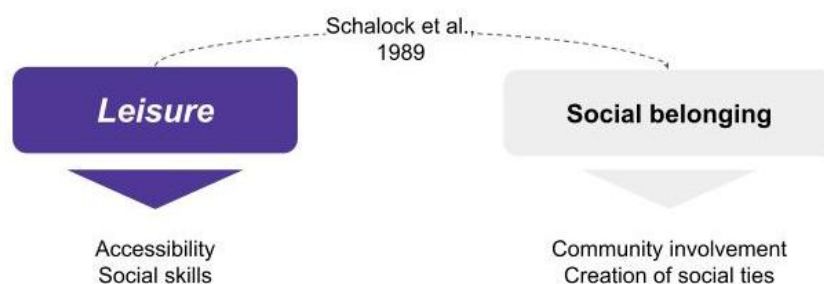


Figure 1 – Conceptualisation of leisure in the QoL model proposed by Schalock et al. (1989)

In summary, the authors' proposal frames leisure as a strategic resource for promoting relationships and developing social skills aimed at empowering people

with disabilities (Schalock et al., 1989, 1990; Schalock, 1990, 1991; MacNeil & Anderson, 1999; Giaconi, 2015; Del Bianco, 2019).

3.2 Leisure in the World Health Organisation's proposal

Among those interested in the concept of Quality of Life is the World Health Organisation (WHO), with specific application objectives. The WHO's perspective frames QoL as “an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns” (WHO, 1995, p. 1405).

In this case, the proposed conceptual framework is linked to the development of a cross-cultural QoL assessment tool, through the cooperation of 15 research units belonging to different cultural settings: the *World Health Organisation Quality Of Life Assessment* (WHOQOL) (WHO, 1995).

The construction of an international instrument for assessing Quality of Life, in this sense, aimed at enabling comparative research to be conducted in different cultural settings, highlighting the role of social and cultural factors in determining QoL levels and ensuring the co-construction of shared languages to express the meanings associated with it and prevent possible interpretative distortions (WHO, 1995).

The survey instrument was developed following a structured research process, the second phase of which (qualitative pilot) involved the identification of key domains and subdomains (*facets*) related to QoL (WHO, 1995). The six domains identified are shown in Table 3 (WHO, 1995, 1998):

Table 3 – Domains in the WHO proposal (Adapted from WHO, 1995)

Domain	Meaning
I. <i>Physical domain</i>	perception of one's physical state
II. <i>Psychological domain</i>	perception of one's cognitive/emotional state
III. <i>Level of independence</i>	perception of one's capacity for autonomous choice
IV. <i>Social relationships</i>	perception of interpersonal relationships and one's social role
V. <i>Environment</i>	perception of contextual resources and barriers
VI. <i>Spirituality/religion/personal beliefs</i>	perception of the meaning of life and lived experiences

With regard to WHOQOL, domain V (*Environment*) includes among its facets participation in leisure activities and opportunities for such participation, mentioning “Participation in and opportunities for recreation/leisure activities” (WHO, 1998, p. 15). Specifically, the leisure subdomain aims to explore a person's ability to participate in free time activities, their personal inclination towards such activities, and the leisure opportunities available to them. The questions designed to investigate this dimension attempt to include all existing forms of pastimes and recreational activities (social and individual, active or passive, casual or serious), focusing on three key aspects (WHO, 1998):

- The ability to engage in leisure activities;
- Opportunities to engage in leisure activities;
- Personal enjoyment in engaging in leisure activities.

The QoL model proposed by the World Health Organisation therefore highlights leisure by exploring not only the opportunities for participation offered, but also the person's ability to engage in such recreational activities and derive personal gratification and enjoyment from them. The focus on three key aspects—ability,

opportunity and enjoyment (WHO, 1998)—provides a comprehensive view of participation in leisure, enriching scientific reflection on the relationship between leisure and Quality of Life (Figure 2).

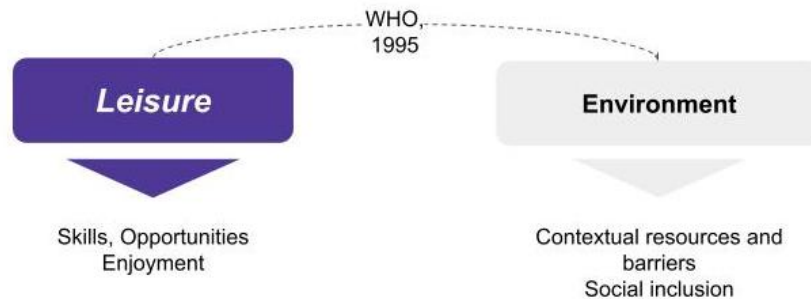


Figure 2 – Conceptualisation of leisure in the QoL model proposed by the WHO (1995)

Recognising a sense of “inclination” towards leisure activities and contexts, in this sense, highlights the centrality of subjective experience in leisure: given a concrete offer of leisure activities and services for the purpose of Quality of Life. The proposed model therefore allows us to recognise the importance of the personal meaning that these take on, also expressed through personal choice and self-determination (WHO, 1998; Del Bianco, 2019).

3.3 Leisure in Felce & Perry’s proposal

One of the Quality of Life models most appreciated by the scientific community is that proposed by Felce and Perry (1995, 1996), who define Quality of Life as “a general wellbeing influenced by objective circumstances and subjective perceptions across a variety of life domains” (Felce & Perry, 1995, p. 63). The QoL model

proposed by the authors identifies five key domains, subsequently supplemented by a sixth domain (Felce, 1997), as illustrated in Table 4.

Table 4 – Domains and topics in Felce and Perry's proposal (Adapted from Felce, 1997)

Domain	Meaning
<i>Physical wellbeing</i>	health, nutrition, fitness, mobility and personal safety
<i>Material wellbeing</i>	wealth or ownership, income, quality of the living environment, transport, security and tenure
<i>Social wellbeing</i>	quality and breadth of interpersonal relationships, community involvement and social inclusion
<i>Productive wellbeing</i>	personal development, self-determination, constructive activity
<i>Emotional wellbeing</i>	happiness, freedom from stress, mental state, self-esteem, spirituality or religious beliefs, sexuality, contentment
<i>Civic wellbeing</i>	privacy, protection under the law, voting, state of the nation and civic responsibilities

The conceptual approach developed by Felce and Perry (1995) outlines the concept of Quality of Life as the intersection between: 1) living conditions (understood as objectively described circumstances); 2) subjective wellbeing (understood as the level of personal satisfaction); 3) personal values and aspirations (understood as a system of meanings and “weights” associated with the respective objective and subjective aspects relevant to one's life).

In the model proposed by the authors, leisure is linked to two main domains: *material wellbeing* and *productive wellbeing*. Firstly, participation in leisure (as well as other activities such as work or civic participation) would be determined by aspects such as living environment, transport, safety and one's occupation as material conditions for the maintenance and pursuit of leisure activities, encompassed in the domain of material wellbeing (Felce & Perry, 1995; Felce,

1997). Secondly, leisure is counted by the authors among the possible dimensions that can express productive wellbeing, following three different trajectories (Felce, 1997):

- Personal development, through the acquisition of specific skills and competences;
- Self-determination, through the exercise of autonomy, choice and control;
- The realisation of constructive activities, according to one's interests and preferences.

In this sense, Felce and Perry's (1995) proposal places leisure in a complex perspective, introducing the role played by material resources in influencing the quantity and quality of leisure activities undertaken by the individual. In this sense, material wellbeing allows us to photograph the objective conditions that initially determine the concrete possibilities available to a person for participating in leisure. At the same time, the very dimension of leisure is connected to the sphere of productive wellbeing, articulating the idea that leisure can offer opportunities for personal growth and empowerment (MacNeil & Anderson, 1999; Del Bianco, 2019) on a par with dimensions such as education, civic participation or work integration (Figure 3).

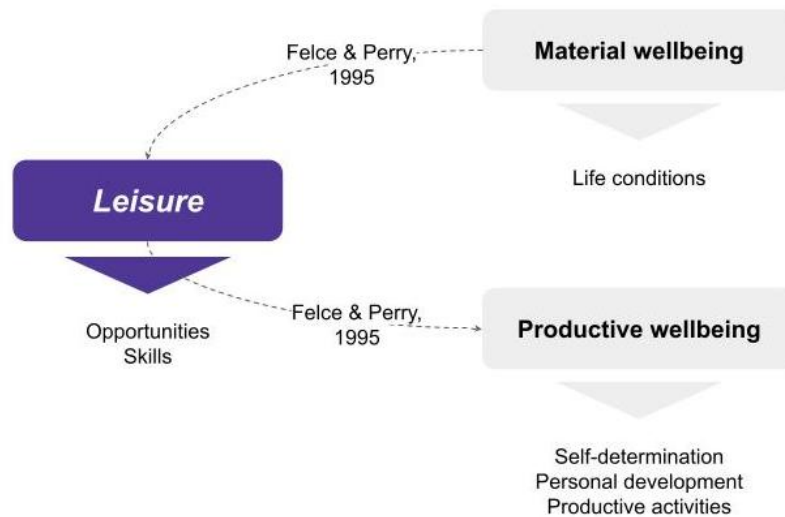


Figure 3 – Conceptualisation of leisure in the QoL model proposed by Felce & Perry (1995)

However, the same authors emphasise that the proposed categorisation should not be interpreted and applied strictly, as there may be overlaps and interrelationships between the proposed domains (Felce, 1997). With this in mind, it is possible to argue for a link between leisure and domains such as *social wellbeing* and *emotional wellbeing*, as both refer to dynamics of personal development and social inclusion that can be promoted through leisure (Felce, 1997).

In summary, the proposal by Felce and Perry (1995) further highlights how leisure is not an isolated dimension, but is closely linked to objective assumptions and subjective implications that determine its value and significance for Quality of Life. This perspective therefore opens up numerous operational considerations for the development of interventions and support aimed at strengthening the link between material resources, personal autonomy and active participation (Hawkins et al., 1999; Schalock & Verdugo Alonso, 2002).

3.4 Leisure in Renwick & Brown's proposal

The conceptual model proposed by Renwick and Brown (1996) defines Quality of Life as “the degree of satisfaction with which people enjoy the possibilities and opportunities considered important for their existence” (Giaconi, 2015, p. 24), identifying three main domains and nine related subdomains for Quality of Life (Brown et al., 1997) as illustrated in Table 5. Specifically, the domain of *Being* refers to a person's characteristics, the domain of *Belonging* refers to a person's integration within their social contexts, while the domain of *Becoming* refers to a person's existential development throughout their life (Giaconi, 2015).

Table 5 – Domains and subdomains in Renwick & Brown's proposal (Adapted from Brown & Brown, 2003)

Domain	Subdomains
<i>Being</i>	• <i>Physical being</i> – body and health • <i>Psychological being</i> – thoughts and feelings • <i>Spiritual being</i> – beliefs and values
<i>Belonging</i>	• <i>Physical belonging</i> – where the person lives and works • <i>Social belonging</i> – the people in their life • <i>Community belonging</i> – the resources in the person's environment
<i>Becoming</i>	• <i>Practical becoming</i> – practical things done in everyday life • <i>Leisure becoming</i> – things done for fun and pleasure • <i>Growth becoming</i> – things done for coping and growth

Renwick and Brown's (1996) proposal highlights how leisure relates to a macro-area linked, on the whole, to the practical, recreational and evolutionary development of the individual (Giaconi, 2015), emphasising the value of this

dimension in the pursuit of personal goals and aspirations throughout life. In detail, the subdomain defined as *leisure becoming* proposed by the authors refers to recreational and leisure activities that do not necessarily have an explicit instrumental value and that can have variable characteristics in terms of type and duration (Renwick & Brown, 1996; Brown et al., 1997). According to the authors, these activities converge in aspects related to personal development, the acquisition of skills and adaptation to change (in terms of coping and growth) (Renwick & Brown, 1996; Brown et al., 1997) (Figure 4).

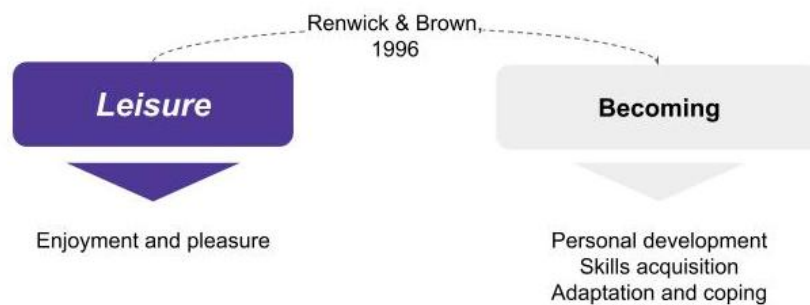


Figure 4 – Conceptualisation of leisure in the QoL model proposed by Renwick & Brown (1996)

In line with these trajectories, and based on previous research, Brown and Brown (2003) systematise the most recurrent domains in the Quality of Life models proposed by scientific literature, including leisure among them (Table 6).

Table 6 – Recurring domains in Quality of Life models (Adapted from Brown & Brown, 2003))

Regarding the person	Regarding what the person does	Regarding the environment
• Material wellbeing • Physical health	• Work • Leisure activities	• Social inclusion • Rights

• Psychological wellbeing • Spiritual wellbeing • Social wellbeing • Self-image • Self-determination	• Personal development • Interpersonal relationships • Intimacy • Education	• Safety • Social wellbeing • Domestic life • Community resources
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As it can be seen, across the various attempts at systematisation, the dimension of leisure is one of the domains most frequently cited by the scientific community in relation to QoL (Brown & Brown, 2003; Verdugo Alonso et al., 2010). This evidence therefore reflects the attention that the scientific community has directed towards leisure as an area relevant to the wellbeing and personal development of the individual (UN, 2006; WLO, 2020).

3.5 Leisure in Cummins's proposal

Cummins' studies (1996, 1997a, 2000, 2005) on the concept of Quality of Life describe this concept as “both objective and subjective, each axis being the aggregate of seven domains” (Cummins, 1997b, p. 7).

With regard to the composite nature of the QoL construct, the author notes a lack of standards for definition and/or measurement, as well as the presence of assessment tools restricted to specific subgroups of the population and therefore inapplicable on a broader scale. In light of these considerations, the author proposes the development of a broader assessment tool, namely the *Comprehensive Quality of Life Scale* (ComQol) (1997a, 1997b, 2000, 2005). In this sense, the ComQol is available in several parallel versions designed to measure the QoL levels of different targets (ComQol-A, for adults; ComQol-S, for students/adolescents; ComQol-I, for people with intellectual disabilities) (Cummins, 1997b).

The scale aims to operationalise, specifically, a multidimensional model of Quality of Life composed of seven domains. Furthermore, the scale is described as multi-axial: it aims to evaluate objective and subjective aspects separately and also allows each domain to be weighted based on its importance to the person and their satisfaction with it (providing a personalised factor for the subjective measurement of QoL, resulting from the values obtained for the “Importance” and “Satisfaction” subscales) (Cummins, 1997b). In the objective assessment, each domain is evaluated on the basis of certain indices (shown in Table 7).

Table 7 – Domains and indices in Cummins' proposal (Adapted from Cummins, 1997b).

Domain	Indices
<i>Material wellbeing</i>	quality of accommodation, property, estimated income
<i>Health</i>	medical appointments, medical conditions or disability, etc.
<i>Productivity</i>	hours devoted to work, education or family, free time, etc.
<i>Intimacy</i>	social interactions, participation in activities, etc.
<i>Safety</i>	quality of sleep, feeling of safety in one's home, anxiety
<i>Community</i>	activities undertaken, social affiliations and responsibilities, etc.
<i>Emotional wellbeing</i>	power of choice, desires, etc.

At first glance, Cummins' proposal (1997a, 1997b) would seem to place the concept of leisure within the realm of *Productivity*, continuing the model proposed by Felce and Perry (1995). It should be noted, however, that the index translated in the table as “free time” is interpreted differently than the concept of leisure. To understand the perspective taken, it is possible to analyse the associated questionnaire item: “In your spare time, how often do you have nothing much to do?” (Cummins, 1997b, p. 16). The next item, also relevant to the domain of

productivity, reads: “On average, how many hours of TV do you watch each day?” (Ibidem). In this context, the author highlights and formalises in the measurement tool a negative relationship between the amount of free time not allocated to meaningful activities (“nothing much to do”) and QoL. Consistently, the same negative relationship is highlighted with reference to passive forms of leisure time use (in this specific case, associated with activities such as watching television). Both items are measured using frequency indicators.

Secondly, the relationship between leisure and QoL emerges in the domain of *Community*, whose first item (activities performed) requires respondents to indicate how frequently they participate in various leisure activities (this time defined by the author as “leisure” specifically), including frequenting places of gathering, cultural consumption activities, sports, etc. In this sense, therefore, there is a positive correlation between leisure activities, community building, and Quality of Life (Cummins, 1997b).

The most interesting aspect, however, emerges “outside” the initially proposed survey tool. The author, in fact, provides for the possibility of modifying the ComQoL by adding additional domains, including leisure itself. As highlighted by the author, leisure represents “a slippery concept” (Cummins, 1997b, p. 50), as its measurement depends largely on qualitative aspects: the increase or decrease in leisure time from an objective point of view would not be sufficient for the purpose of assessing QoL levels. In this regard, the author introduces the concept of “quality leisure” (Ibidem) as time spent in a meaningful and constructive way according to a personal perspective. In this direction, the author concludes that leisure, understood as “quality leisure” and not as “free time”, can be included in the domain of *Emotional wellbeing* as the possibility of choosing the activities one wants to undertake based on one's preferences and desires (Cummins, 1997b).

Overall, Cummins' proposal (1997a, 1997b, 2000, 2005) places leisure at the crossroads of three main trajectories: productivity, community belonging and emotional wellbeing. Therefore, leisure is conceptualised from a functional point of view (linked to the concrete use of time in activities perceived as more or less constructive) and from a self-determination point of view (linked to freedom of choice and the satisfaction of personal preferences), straddling free time and quality leisure (Figure 5).

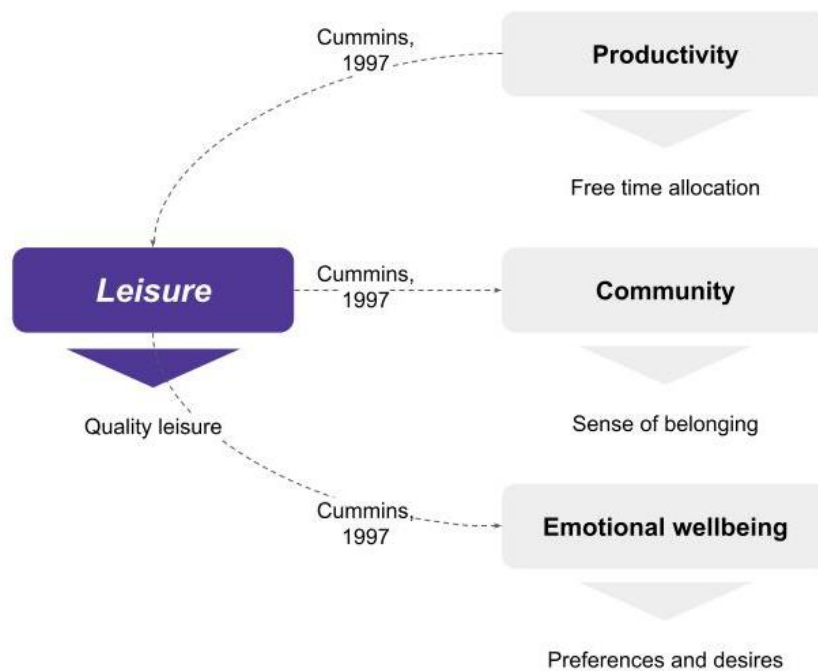


Figure 5 – Conceptualisation of leisure in the QoL model proposed by Felce & Perry (1995)

The concept of quality leisure for QoL, in the model proposed by the author, implies two central considerations. Firstly, the author appears to associate his concept of quality leisure with social activities, in line with studies that highlight leisure as a resource for promoting community belonging and the development of interpersonal relationships (Schalock et al., 1989; WHO, 1995; WLO, 2020; Iso-Ahola & Baumeister, 2023). The second is to recognise the role of personal choice

in determining quality outcomes in relation to leisure activities, in line with considerations by scientific literature that highlight the relationship between choice in the allocation of leisure time and wellbeing (Shaw, 1985; Felce & Perry, 1995; Felce, 1997; Chan et al., 2012; Iso-Ahola, 2013; Del Bianco, 2019; Tokarski & Zarotis, 2020).

In summary, the concept of quality leisure enriches our theoretical reflections, retracing scientific considerations about the benefits of leisure for Quality of Life in relation to the construction of social bonds (Iso-Ahola & Baumeister, 2023) and the experience of opportunities for self-determination and personal expression (Iso-Ahola & Park, 1996; MacNeil & Anderson, 1999; Del Bianco, 2019).

3.6 Leisure in Schalock & Verdugo Alonso's proposal

The Quality of Life model proposed by Schalock and Verdugo Alonso (2002, 2006) has become increasingly central to scientific debate, gaining recognition from the national and international scientific community (Croce et al., 2014; Giaconi, 2015; Gómez et al., 2015; Cottini et al., 2016). For these reasons, it can be said that this heuristic model represents the most widely accepted theory in the current scenario.

The authors' proposal emerges from an in-depth analysis of the scientific literature produced on the subject of Quality of Life from 1985 to the early 2000s (Schalock, 2004). In this sense, the multidimensional model proposed by the authors is divided into eight “core domains” (Schalock, 2004, p. 206), which can be associated—as anticipated—with respective indicators and descriptors for their operationalisation (Schalock & Verdugo Alonso, 2002; Schalock, 2004; Giaconi, 2015; Giaconi & Rodrigues, 2018) (Table 8).

The authors' proposal for systematisation is characterised by a systemic and ecological nature, offering three different interpretations of the concept of QoL (Schalock & Verdugo Alonso, 2002, 2006): the reference to a life of quality from a subjective perspective (micro-systemic level); a functional construct negotiated at a cultural and social level (meso-systemic level); an operational framework that guides policies, practices and external conditions for the wellbeing of communities (macro-systemic level). While the micro-system refers to the “immediate social settings” in which the person finds themselves (Schalock & Verdugo Alonso, 2002, p. 25), the meso-system encompasses a more extensive community dimension, which includes external services and realities. Finally, the macro-system refers to “the overarching patterns of culture, social-political trends, economic systems, and society-related factors” (Ibidem), which influence each person's system of values and meanings. In this sense, the proposal by Schalock and Verdugo Alonso (2002) goes beyond the exclusive individual sphere, embracing methodological pluralism for its conceptualisation and detection (Schalock, 2004). This approach gives Quality of Life the reference value for the design and implementation of social and educational policies aimed at promoting inclusive processes and quality prospects in people's lives, including the identification of support services for areas such as care, health and leisure (Schalock & Verdugo Alonso, 2002, 2006).

Table 8 – Domains and indicators in the proposal by Schalock and Verdugo Alonso (2002)

(Giacconi, 2015, p. 23; Adapted from Schalock & Verdugo Alonso, 2006)

Domain	Indicators
<i>Social inclusion</i>	integration into the community, participation in the community, role, support, acceptance
<i>Physical wellbeing</i>	nutrition, personal hygiene, health, healthcare, leisure
<i>Interpersonal relationships</i>	family relationships, friendships, work and social relationships, intimacy

<i>Material wellbeing</i>	possessions, property, occupation, financial situation, housing, security
<i>Emotional wellbeing</i>	satisfaction, self-concept, security, spirituality, happiness
<i>Self-determination</i>	personal opinions and preferences, decisions and choices, personal control
<i>Personal development</i>	personal enrichment, skills, personal abilities, fulfilment
<i>Rights</i>	knowledge of rights, protection, privacy, confidentiality, respect

According to the proposal by Schalock and Verdugo Alonso (2002, 2006), leisure falls within the scope of physical wellbeing, as an indicator thereof. In this context, leisure is therefore conceived as a set of domain-specific perceptions, behaviours or conditions (Schalock, 2004, p. 205) that reflect a person's wellbeing from a functional, operational and applicable point of view for the concrete measurement of QoL. In terms of physical wellbeing, leisure appears alongside indicators such as health, nutrition, and so on. The authors propose four descriptors for the Leisure Time indicator: “*Recreational Activities, Hobbies, Opportunities, Creativity*” (Schalock & Verdugo Alonso, 2002, p. 184).

In the authors' proposal, leisure activities are defined as “life enrichers” (Schalock & Verdugo Alonso, 2002, p. 25) from a micro-systemic point of view. Leisure activities (which also includes social or community activities) would complement the essential conditions (such as safety or nutrition) within the Quality of Life framework (Schalock & Verdugo Alonso, 2002; Schalock, 2004). However, it is specified that inclusion in leisure is not a priori relevant to QoL, but is rather based on personal values, beliefs, needs and interests (Schalock & Verdugo Alonso, 2002), also from a self-determination perspective (Iso-Ahola & Park, 1996; MacNeil & Anderson, 1999; Del Bianco, 2019). In addition to this perspective, the authors refer to leisure as part of a set of social indicators, i.e. the external and

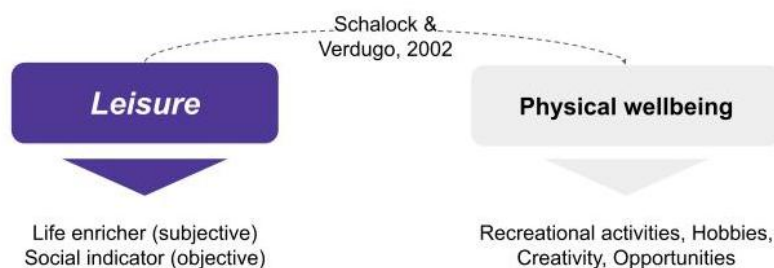
environmental conditions that allow the Quality of Life of a community (meso-systemic level) or a larger entity (macro-systemic level) to be assessed, albeit limited to objectively measurable aspects (Schalock & Verdugo Alonso, 2002).

In this regard, Schalock and Verdugo Alonso (2002) highlight the need to offer leisure opportunities to promote individual wellbeing, support families and implement personal services. With regard to the family in particular, the authors present leisure as one of the most explored domains in Family-Centred QoL, as well as one of the dimensions that caregivers should focus on in order to promote interpersonal relationships (Schalock & Verdugo Alonso, 2002).

In summary, the comprehensive model proposed by Schalock and Verdugo Alonso (2002, 2006) unfolds leisure along two trajectories:

- Leisure as a subjective indicator (life enricher): personal meaning and value assigned at the micro-systemic level (e.g., personal experience of leisure);
- Leisure as an objective indicator (social indicator): environmental and external conditions referring to the meso-systemic and macro-systemic levels (e.g., leisure opportunities and system).

In this sense, the objective perspective refers to aspects such as the right to leisure, the provision of services and support for recreational activities, the availability of material resources to enjoy them, as well as the relationship between leisure activities and community involvement. At the same time, the subjective perspective highlights the personal significance of these conditions, emphasising aspects related to the resulting levels of emotional wellbeing, freedom of choice and self-determination, self-expression and pursuit of one's interests, as well as personal development (Schalock & Verdugo Alonso, 2002, 2006) (Figure 6).



*Figure 6 – Conceptualisation of leisure in the QoL model proposed by Schalock & Verdugo
Alonso (2002)*

Overall, the multidimensional framework proposed by Schalock and Verdugo Alonso (2002, 2006) offers an in-depth and balanced perspective on the relationship between leisure and Quality of Life, also thanks to the adoption of an ecological approach reflected in the three levels of interpretation applicable to the construct of QoL. This perspective allows leisure to be placed in a systemic context that considers the alignment between personal, family and social dimensions.

In light of the relevance that the model has acquired in scientific debate, it seems appropriate to adopt the multidimensional QoL model proposed by Schalock and Verdugo Alonso (2002) as a theoretical reference for the development of reflections on the centrality of leisure in the lives of people with disabilities.

4. A comprehensive reading

The review of the main proposals for systematising the Framework of Quality of Life has made it possible to explore some of the most relevant conceptual trajectories outlined by scholars in relation to the relationship between this construct

and the dimension of leisure. As has been noted, the different perspectives offered by the scientific community highlight a multitude of aspects in relation to leisure and QoL, revealing their dynamic and multidimensional intersection on the basis of experimental research and systematic mappings (Schalock et al., 1989; WHO, 1995; Felce & Perry, 1995; Renwick & Brown, 1996; Cummins, 1997b; Schalock & Verdugo Alonso, 2002, 2006; Giaconi, 2015). Although not representing a complete picture, the proposed synthetic mapping allows us to identify the conceptual paths that link leisure opportunities to the construct of QoL, highlighting the potential value of this dimension in promoting wellbeing at the individual, community and societal levels (Schalock & Verdugo Alonso, 2002, 2006; Giaconi, 2015). In this sense, the comparison between the proposed multidimensional models highlights specificities and similarities that allow us to reflect on the theoretical and practical perspectives related to leisure within the construct of Quality of Life.

A first common thread among the conceptual references is found in the recognition of leisure as a crucial factor for building interpersonal relationships and social inclusion (Schalock & Kiernan, 1990; Schalock, 1991; Cummins, 1997b; WHO, 1998; Schalock & Verdugo Alonso, 2002, 2006; Giaconi, 2015). Leisure activities would constitute an important opportunity to encourage participation in community life, the building of meaningful relationships, the acquisition of a sense of belonging and social roles that are functional to collective life and social wellbeing (Giaconi & Del Bianco, 2025). From an applied perspective, this vision implies the need to ensure concrete opportunities for people with disabilities to participate in leisure activities. In this regard, we refer to what was noted in the second chapter, namely that in order to promote inclusive processes, it appears necessary to ensure the design and structuring of services and supports that promote the accessibility of leisure goods, services and facilities (Schalock, 1991; Giaconi,

2015; Giaconi et al., 2021; Shogren et al., 2022; Del Bianco et al., 2024; Giaconi et al., 2024a). This aspect allows us to recall what Felce and Perry (1995) highlighted about the relationship between leisure, rights and material wellbeing: the recognition of a series of rights relating to leisure, as well as the guarantee of material conditions for its enjoyment, are two central factors in ensuring quality outcomes in the field of inclusive leisure (Felce & Perry, 1995; UN, 2006; WLO, 2020).

A second level of continuity in the proposals for conceptualising QoL concerns the subjective dimension of leisure as a quality resource for personal wellbeing. Following this trajectory, the subjective aspects related to leisure (e.g., the type of activities carried out and the gratification derived from them) would appear to be more influential than the objective aspects (e.g., the amount of leisure time available overall). These aspects recall the theme of freedom of choice based on personal inclinations, interests and desires, already noted in the second chapter. In this sense, as reconstructed from research, leisure can provide opportunities to promote emotional wellbeing, self-determination and personal development when it is aligned with the specific expectations, desires and needs of each person (Schalock et al., 1989; Felce & Perry, 1995; WHO, 1995; Iso-Ahola & Park, 1996; Cummins, 1997a, 1997b; MacNeil & Anderson, 1999; Schalock & Verdugo Alonso, 2002; Giaconi, 2015; Del Bianco, 2019; Giaconi & Del Bianco, 2025). At an operational level, these considerations highlight how leisure can offer opportunities for personal empowerment and self-expression, allowing individuals to engage in activities related to their preferences and aligned with their personal inclinations. In this regard, it is also essential to provide interventions and support that can sustain the development of the skills necessary for participation in leisure activities, promoting the acquisition of key skills for personal growth and ensuring a meaningful horizon for individual planning (Marmocchi et al., 2004; Giaconi, 2015; Cottini, 2024b).

In summary, with regard to the relationship between leisure and Quality of Life, it seems appropriate, from an epistemological and methodological point of view, to adopt the perspective proposed by Schalock and Verdugo Alonso (2002) with regard to the definition of leisure as a *life enricher* and *social indicator*. This approach, in detail, allows us to appreciate leisure both at the macro- and meso-systemic level (focusing on policies and practices), as well as at the micro-systemic level (recalling the relevance of personalised interventions and support) (Marmocchi et al., 2004; UN, 2006; Giaconi, 2015; WLO, 2020; Cottini, 2024b; Giaconi & Del Bianco, 2025). The complementarity of these levels makes it possible to restore the ecological nature of the dimension of leisure, allowing it to be appreciated within designs aimed at both contexts and individuals. In line with this perspective, the next chapter will explore the role of leisure within the pedagogical trajectories encompassed in the Life Project (Legislative Decree 62/2024; Giaconi & Del Bianco, 2025).

5. Summary and implications

In this chapter, we have explored the relationship between leisure and Quality of Life, with the aim of reconstructing a theoretical framework that can be used to guide the care provision for people with disabilities and the design of interventions and policies aimed at promoting inclusive processes in this area. By reviewing the research that has highlighted the correlation between participation in leisure and QoL, it has been possible to show how this dimension constitutes a privileged space for aspects such as personal development, self-determination and social inclusion (Schalock et al., 1989; Felce & Perry, 1995; Cummins, 1997b; Schalock & Verdugo Alonso, 2002, 2006).

Firstly, the theoretical framework of Quality of Life (QoL) was explored in depth (Schalock & Verdugo Alonso, 2002, 2006; Giaconi, 2015), highlighting how—through a multidimensional perspective centred on the person and the environments in which they live—it can be a key resource for guiding care provision, educational research and the dissemination of social policies to support the inclusion and protection of the rights of people with disabilities (Felce, 1997; Schalock & Verdugo, 2002; Schalock, 2004; UN, 2006; Verdugo Alonso et al., 2012; Giaconi, 2015). In this regard, the key principles relating to QoL as a multidimensional construct were presented, detailing the methodological proposal of Schalock and Verdugo Alonso (2002) with respect to the concepts of *domain*, *indicator* and *descriptor* (Giaconi, 2015).

Once the general framework for the Framework of Quality of Life was outlined, the conceptualisation of leisure within the main theoretical models proposed by scholars with reference to this construct (Conner, 2016) was examined in order to explore the different perspectives offered by scientific literature on the subject. Specifically, the theoretical models proposed by Schalock and colleagues (1989), the World Health Organisation (1995), Felce and Perry (1995), Renwick and Brown (1996), Cummins (1997) and Schalock and Verdugo Alonso (2002, 2006) were presented, illustrating the scientific assumptions, salient characteristics and positioning of leisure within each proposal.

Looking at the conceptual models of QoL illustrated, it was possible to find a variety of perspectives on the conceptualisation of leisure, while recognising common threads among the proposals. Among the main insights that emerged, we can mention the recognition of leisure as a resource for promoting a sense of belonging to the community (Schalock et al., 1989, 1990), the importance of personal inclinations and perceptions in determining the levels of QoL that derive from this dimension (WHO, 1995, 1998; Renwick & Brown, 1996), the impact of

material resources in determining opportunities for participation (Felce & Perry, 1995), the emotional wellbeing linked to the significance of leisure experiences (Cummins, 1997a, 1997b), the dual interpretation of leisure as a life enricher and social indicator (Schalock & Verdugo Alonso, 2002).

Overall, in light of the above, leisure, as an indicator of physical wellbeing, appears to contribute to areas such as self-determination (Felce & Perry, 1995; Renwick & Brown, 1996), emotional wellbeing (Cummins, 1997b), personal development (Schalock, 1991; Felce & Perry, 1995; Felce, 1997; Schalock & Verdugo Alonso, 2002), social inclusion and interpersonal relationships (Schalock et al., 1989; WHO, 1998). At the same time, the models illustrated emphasise the link with rights (UN, 2006; WLO, 2020) and material wellbeing (Felce & Perry, 1995), which constitute the concrete conditions for pursuing leisure activities from a meso- and macro-systemic point of view (Schalock & Verdugo Alonso, 2002).

In conclusion, given the important relationship between leisure and the domains of Quality of Life, there is a need to explore this dimension in greater depth within the planning and operational trajectories aimed at the care provision for people with disabilities. The subject of the next chapter will therefore be the framing of leisure within the Life Project as a meaningful tool for the planning of integrated, coherent interventions aimed at improving the QoL of people with disabilities.

4. Leisure for the Life Project: perspectives and challenges

1. Theoretical orientations

As it was possible to highlight, scientific literature considers leisure as an educational and inclusive dimension, capable of representing a significant source of meaning in everyone's life and offering opportunities for self-expression, self-realisation and, overall, Quality of Life (Schalock, 1991; Giaconi, 2015; Giaconi & Del Bianco, 2025). These aspects clearly highlight some of the most relevant elements for inclusive and integrated planning, which is functional to the creation of existential paths aimed at satisfying personal needs, desires and expectations (Giaconi et al., 2024b). In this chapter, therefore, we intend to deepen the pedagogical reflection on Leisure Time—already related to the theoretical Framework of Quality of Life (Schalock & Verdugo Alonso, 2002, 2006; Giaconi, 2015)—in light of the Life Project, placing the dimension of leisure within the perspectives and challenges related to the structuring of inclusive planning and practices for integrated, coherent and QoL-oriented care provision for people with disabilities and their families.

The need to focus on leisure within the Life Project is based on the already illustrated recognition of a right to leisure (UN, 2006; Lansdown, 2022; Byrne, 2024; WLO, 2020), which establishes the shared responsibility to design and offer

meaningful and quality leisure opportunities. At the same time, the reference to leisure in the Life Project is linked to the relationship between participation in leisure and the levels of Quality of Life experienced by each person (Felce & Perry, 1995; WHO, 1995; Iso-Ahola & Park, 1996; Cummins, 1997a; MacNeil & Anderson, 1999; Schalock & Verdugo Alonso, 2002; Badia et al., 2013a, 2013b; Giaconi, 2015; Del Bianco, 2019; Tokarski & Zarotis, 2020; WLO, 2020), indicating how leisure represents a central life enricher in promoting dimensions such as social inclusion, self-determination and self-expression, as well as the creation of meaningful social networks (Schalock & Verdugo Alonso, 2002; Giaconi & Del Bianco, 2025). In this sense, the tradition of studies specific to Special Pedagogy details, among its most relevant research perspectives, the need to investigate the dimension of leisure in the construction of QoL-oriented existential paths for people with disabilities, highlighting challenges, issues and pedagogical implications related to the “grounding” of this dimension from a planning point of view (Schalock, 1991; Giaconi, 2015; Giaconi et al., 2021; Giaconi et al., 2024b). The choice to place leisure within these trajectories, therefore, aims at highlighting how this area can be operationalised within a systemic framework of planning, pathways and supports aimed at ensuring satisfactory outcomes for QoL in the care provision for people with disabilities and their families (Canevaro et al., 2021; Giaconi & Del Bianco, 2025).

Although the link between leisure and QoL has been highlighted by scientific literature (Badia et al., 2013a, 2013b), this dimension has often been substantially marginalised in the care provision for people with disabilities and their families, resulting in its “great absence” in educational planning and interventions because it is mistakenly considered by the professionals involved in care provision as a residual element or a sphere which is exclusively linked to rehabilitation purposes (Cottini, 2024b). For these reasons, there is an urgent need to identify and define

theoretical and operational perspectives capable of recognising and enhancing leisure within planning tools such as the Life Project, with the aim of expressing its educational and generative potential (Giaconi & Del Bianco, 2025). As highlighted by Badia et al. (2012), the operationalisation of leisure in educational planning requires the evaluation of elements such as the repertoire of leisure activities carried out and the levels of participation achieved, the preferences expressed for leisure, interest in new activities and freedom of choice.

The aim of this chapter, therefore, is to reconstruct—from an epistemological and methodological point of view—the conceptual and operational space in which leisure fits into the definition of Life Projects oriented towards Quality of Life (Schalock & Verdugo Alonso, 2002, 2006; Verdugo et al., 2012; Giaconi, 2015; Giaconi et al., 2022). Specifically, the chapter is divided into three main sections. The first section will examine the Life Project as a conceptual and operational tool for the care provision for people with disabilities, outlining its salient aspects on the basis of the relevant scientific literature and the Decree No. 62 of 3 May 2024, which represents the latest implementing measure of the Enabling Law on disability (No. 227/2021). Secondly, we will move on to an in-depth analysis of leisure within the framework outlined above. Specifically, we will examine the pedagogical principles related to the conceptualisation of leisure in the Life Project and the alignment strategies that can promote its operationalisation. Finally, we will examine the procedures and tools for measuring and assessing this dimension, paying particular attention to the methodological challenges underlying such procedures.

2. The Life Project

Special Pedagogy studies define the Life Project as a central operational resource for the promotion and planning of systemic, integrated and transversal interventions aimed at achieving a better Quality of Life (Pavone, 2009; Giaconi, 2015; Canevaro et al., 2021). From this perspective, the Life Project represents a meaningful framework that harmoniously encompasses the multitude of actions and interventions aimed at promoting the acquisition of knowledge, skills and abilities that are central to active participation and self-realisation (Giaconi, 2015; Cottini et al., 2016). Since the concepts of Life Project and “life course” are complementary, the essence of the former lies in the possibility of imagining and realising a life path aimed at meaningful and realistic long-term horizons, which can gradually materialise through continuous growth and actions that span from the individual to the experiences and social contexts they encounter (Montobbio & Lepri, 2000; Medeghini, 2006; Ianes & Cramerotti, 2009; Mura, 2016; Giaconi et al., 2024b). In this sense, the construction of a QoL-oriented Life Project allows for the design and definition of pathways oriented towards quality outcomes according to a multidimensional approach (Schalock & Verdugo Alonso, 2002, 2006; Giaconi, 2015; Cottini, 2021, Amor et al., 2023).

In the national context, the most recent regulatory reference related to the Life Project—Decree No. 62 of 3 May 2024 on the “Definition of disability, basic assessment, reasonable accommodation, multidimensional assessment for the development and implementation of the personalised and participatory Individual Life Project” (*Definizione della condizione di disabilità, della valutazione di base, di accomodamento ragionevole, della valutazione multidimensionale per l’elaborazione e attuazione del Progetto di Vita individuale personalizzato e partecipato*)—defines the Life Project as an “individual, personalised and participatory project of the person with disability which, starting from their desires, expectations and preferences, aims to identify, in a unified existential vision, the

formal and informal support needed to enable the person to improve their quality of life, develop their full potential, choose their living environment and participate on an equal basis” (Art. 2, paragraph 1, letter n)).

This definition allows us to focus on what has already been defined by research in Special Pedagogy, which illustrates how the Life Project unfolds, from a conceptual point of view, between a *potential* dimension—expressed in a sense of imagination, desire and aspiration for the future—and a *current* dimension—anchored to concrete assessments and preparatory actions that can be realised in the present (Ianes & Cramerotti, 2009; Pavone, 2009; Caldin & Giaconi, 2021; Canevaro et al., 2021). In this sense, studies detail the importance of building a Life Project that is consistent and aligned with the expectations, needs and aspirations of the person, capable of evolving dynamically through the different stages of their life and adapting to the specificities that characterise their existential journey (Giaconi & Del Bianco, 2025). The implementation of the Life Project therefore supports a path based on comprehensive care provision and an ecological approach, co-constructed gradually and continuously renewed (Chiappetta Cajola, 2015; Mura, 2016, Giaconi et al., 2024b), which takes shape “by feeding on the material possibilities and constraints that the individual actually encounters, but also on the dreams, desires and aspirations to which each person aspires” in a “unique and unrepeatable” form (Mura, 2016, p. 194).

The ultimate goal of the Life Project, in this context, is to guarantee and promote—through an integrated, dynamic and co-constructed programme of interventions—the acquisition of knowledge, competences and skills that are functional to achieving a better Quality of Life according to the person's goals, desires and aspirations (Canevaro et al., 2021; Giaconi & Del Bianco, 2025). In other words, the Life Project aims to encompass a harmonious and coordinated set of actions and interventions capable of offering the person the right conditions to

express their existential potential (Mura, 2016; Bianquin & Besio, 2021; d'Alonzo & Giaconi, 2024).

Essential to the structuring of the Life Project is the adoption of a longitudinal and network-based approach, as highlighted by scientific literature (Montobbio & Lepri, 2000; Cottini & Fedeli, 2007; Ianes & Cramerotti, 2009; d'Alonzo & Giaconi, 2024; Giaconi & Del Bianco, 2025).

Firstly, a long-term view, capable of ideating, planning, and implementing pedagogical lines of action according to a developmental and temporal continuity perspective appears to be necessary (Caldin & Giaconi, 2021). The relevance of such a perspective emerges, in particular, in light of the life cycles and transition phases that people with disabilities and their families encounter, reaffirming the importance of a planning that should take place over time and in a timely manner (Montobbio & Lepri, 2000; Cottini et al., 2016; Caldin & Giaconi, 2021; d'Alonzo, 2021; D'Angelo, 2025). In this sense, the absence of long-term planning can hinder aspirations for a meaningful and adequately supported future, limiting the possibilities for self-determination and self-realisation in adult life (Del Bianco, 2024). The longitudinal perspective, therefore, aims to protect and maintain the significance of one's life path, making the Life Project a central resource for cultivating an idea of a desirable, sustainable and achievable future (Pavone, 2009; Giaconi et al., 2020; Friso & Caldin, 2022).

Secondly, the network dimension emerges as a key implementation factor for achieving a harmonious Life Project based on the synergy between the local community, organisations, institutions, families and the person with disability themselves (Giaconi & Del Bianco, 2025). In this sense, networking aims to build a dynamic system of interconnections, in which each actor involved can make a unique and constructive contribution thanks to their specific resources, overcoming the mere collection of fragmented, isolated or uneven interventions (Bianquin &

Besio, 2021; Friso & Caldin, 2022). The network approach, therefore, gives the Life Project a relational and participatory imprint, promoting a holistic view of the person and situating their existential journey in a scenario studded with conscious and coordinated presences, in which each intervention is the result of a shared choice within an integrated system (Goussot, 2011; d'Alonzo & Giaconi, 2024; D'Angelo, 2025).

With regard to organisational and professional implications, therefore, Special Pedagogy studies highlight how the Life Project must embody pedagogical principles such as continuity in taking charge and critically pursuing objectives, globality in defining assessments, as well as the breadth and depth of the perspective aimed at informing the planning (Pavone, 2014). These aspects would, in fact, allow for the structuring of an assessment and support system centred around the person and oriented towards their wellbeing, through a personalised and participatory approach aimed at ensuring the active involvement of all actors and maintaining a constructive vision regarding the future (Giaconi et al., 2024b; D'Angelo, 2025). Therefore, the Life Project aims to embrace a *lifelong* and *lifewide* perspective (Giaconi & Del Bianco, 2025), promoting authentic and contextualised planning that allows for “the enhancement of identity in the broader social context” (Canevaro, 2004, p. 526).

3. Leisure in the Life Project of people with disabilities

As emphasised, the Life Project represents the conceptual and operational resource capable of achieving longitudinal and multidimensional care provision, promoting and developing participatory and collaborative action programmes to achieve a better Quality of Life within a context that enhances the role and social

function of the person (Giaconi, 2015; Giaconi et al., 2024b). Among the dimensions and areas of life that the Life Project intends to consider in order to achieve these goals, it is therefore necessary to include leisure as a central space for promoting personal development and responding to needs, desires and aspirations (Giaconi & Del Bianco, 2025). In this direction, the aforementioned Decree No. 62/2024, in line with the scientific evidence produced by Special Pedagogy studies, allows us to identify the main pedagogical lines that are necessary for the conceptual and operational framing of leisure in the development and implementation of the Life Project. Through these trajectories, therefore, the dimension of leisure can represent one of the resources recognised in the Life Project to promote the construction of an integrated plan capable of considering the needs and aspirations of the person, incorporating procedures, recommendations and guidelines aimed at ensuring its significance for their growth (Giaconi & Del Bianco, 2025).

As anticipated in the introduction, the following sub-sections propose a reconstruction of leisure within the Life Project according to two main areas of reflection: the pedagogical principles underlying the conceptualisation of leisure in the Life Project and the alignment strategies aimed at its operationalisation to promote the implementation of Quality of Life, following the evidence offered by Special Pedagogy research and the guidelines provided by Legislative Decree 62/2024 (Giaconi & Del Bianco, 2025).

3.1 Pedagogical principles

Legislative Decree 62/2024 highlights, first and foremost, the adoption of a holistic and multidimensional approach to the care provision for people with

disabilities (Schalock, 1991; Giaconi, 2015; Giaconi & Del Bianco, 2025). Specifically, the need to consider the role of facilitators and barriers in different areas of a person's life follows the bio-psycho-social conceptualisation of disability (WHO, 2001), highlighting how this derives from the complex interrelationship between personal characteristics and living environments. In this same vein, therefore, there is a need to remove the barriers that hinder the participation of people with disabilities, while providing the necessary support to enable them to fully enjoy their rights (Aiello & Giaconi, 2024; d'Alonzo & Giaconi, 2024). From this perspective, research supports an interpretation of leisure that responds to these pedagogical guidelines, reaffirming the need to consider leisure contexts according to a personalised approach, focusing on environmental factors that can act as facilitators or barriers in order to guide educational planning. Therefore, interventions tailored and adapted to the specific needs of the person are promoted, as well as actions aimed at creating accessible and inclusive leisure contexts (Steinhardt et al., 2021; d'Alonzo & Giaconi, 2024; Giaconi et al., 2024a; Giaconi & Del Bianco, 2025). These aspects recall the distinction between “time for leisure” and “leisure time” already presented in the second chapter (Aitchison, 2003, p. 956), highlighting the need for an in-depth analysis of the way active participation can be promoted in leisure, aimed at guiding planning to ensure inclusive and personally meaningful leisure experiences (Marques et al., 2021; Giaconi & Del Bianco, 2025). In this sense, studies emphasise how the planning of interventions and supports, leveraging a multidimensional approach, should go beyond general assumptions to address the specific experience of each person (Wright et al., 2019), identifying the most effective strategies to promote participation (Haythorne et al., 2022). From this perspective, it is necessary to focus on resources and supports within the Life Project in order to ensure appropriate and satisfactory levels of participation in leisure contexts (Felce & Perry, 1995; Felce, 1997; Giaconi, 2015).

Secondly, leisure should be part of a person-centred approach, which recognises self-determination as a fundamental and inalienable right of people with disabilities. As repeatedly stated in Legislative Decree 62/2024, the Life Project is based on the full involvement of the person with disability, who is called upon to participate in all actions leading to its implementation, from multidimensional assessment to drafting and monitoring. This represents an important change of perspective compared to past practices, which often saw people with disabilities as passive recipients of hetero-directed interventions. This dimension requires the adoption of an approach that keeps people with disabilities at the centre of the planning process, ensuring their self-representation in the construction of a life path that reflects and values their expectations, goals and desires. Drawing on principles and practices of emancipation and empowerment, the dimension of leisure thus becomes a space where each person can express their needs and aspirations, within frameworks of meaning that are co-constructed and necessarily personalised according to the specific characteristics. This aspect is in line with scientific studies, which specify that the benefits of leisure are conditioned by personal values, beliefs, needs and interests (Schalock & Verdugo Alonso, 2002), also from a self-determination perspective (MacNeil & Anderson, 1999; Iso-Ahola & Park, 1996; Del Bianco, 2019). This pedagogical approach highlights the need to ensure, during the planning phase, the possibility of evaluating and choosing leisure contexts and activities according to one's preferences, a central aspect in promoting a sense of personal fulfilment and satisfaction (Labbé et al., 2019; Haythorne et al., 2022). It is therefore recognised that each person has “unique needs, including leisure needs” (Rogers et al., 1998, p. 128), which, when not met, mean that specific leisure pursuits have no value or meaning for one's Quality of Life (Badia et al., 2011a; Armila et al., 2017). The need to ensure “person-centred recreational activities” (Haythorne et al., 2022, p. 357) calls for, as mentioned above, the need to promote

the most informed decision-making process possible (Rogers et al., 1998; Shikako-Thomas et al., 2013; Shogren, 2013). For these reasons, it is essential that those involved in care provision encourage people with disabilities to express their wishes, supporting their awareness of the options available for leisure (Hoge & Dattilo, 1995; Aitchison, 2000; Shikako-Thomas et al., 2013; Evcil, 2017) and building a situation of mutual trust and respect (Pavone, 2009). Only through this lens, therefore, is it possible to anchor leisure to personal aspirations, meanings and desires, ensuring its harmony with all the other trajectories outlined in the Life Project (Giacconi & Del Bianco, 2025).

A third pedagogical aspect inherent in the consideration of leisure within the Life Project recalls the aforementioned life span perspective, which is embodied in the continuity and flexibility of the programmes and interventions that are designed, as illustrated in Legislative Decree 62/2024. This approach recognises that the life path of each person is an intrinsically dynamic and constantly changing process, which requires the constant adaptation of actions and support measures in light of the changes that the person with disability and their family may encounter. The structuring of a Life Project capable of evolving in parallel with the person, focusing on a future acted in a timely manner, calls for the need to interpret leisure as a dimension capable of traversing the different phases of transition while maintaining consistent meanings (Rogers et al., 1998; Hawkins et al., 2008). It is therefore important to consider how the relationship between the person and their participation in leisure is subject to intrapersonal variability linked to their growth and changing living conditions. The same leisure contexts may therefore be more or less appropriate depending on the stage of life a person is going through, requiring constant monitoring of the levels of satisfaction and gratification they can generate for the person within the Life Project (Labbé et al., 2019; Haythorne et al., 2022). This same dimension, in a complementary way, can also be interpreted in

terms of a resource capable of ensuring continuity and growth, able to evolve appropriately through the stages of the life cycle and the changes that these imply (Montobbio & Lepri, 2000; Caldin & Giaconi, 2021). From this perspective, structuring leisure within the Life Project can help to reduce the risk of individuals feeling catapulted into conditions of isolation or a lack of purpose as a result of changes inherent in their life journey (Giaconi, 2015; d'Alonzo, 2022), proposing an interpretation of free time as a source of “meaning in life (if not of life)” (Iso-Ahola & Baumeister, 2023, p. 3).

A further principle considered central by scientific literature for the planning of free time within the Life Project, and also reflected in Legislative Decree 62/2024, is represented by the network, which was discussed in the previous paragraph. The promotion of substantial collaboration and shared responsibility among all those involved in the inclusion process promotes a joint commitment that also impacts leisure contexts. Specifically, the collaborative dimension calls for coordinated actions aimed at structuring an inclusive and integrated leisure time system, centred on the creation of a support network capable of involving all actors that are part of the care provision for people with disabilities (Felce & Perry, 1995; Schleien et al., 1996; Wright et al., 2019; Giaconi et al., 2024b). In this sense, the structuring of a joint work between local organisations, schools, families and the person with disability themselves in the context of leisure has a dual function. On the one hand, it expands opportunities for participation in leisure activities by promoting effective and personalised strategies and supports based on the exchange of information and best practices (Marques et al., 2021; Steinhardt et al., 2021). On the other hand, it also helps to nurture and spread a culture of inclusion specific to leisure contexts, encouraging a multi-sectoral organisation based on the inclusive skills of each actor involved and on overcoming exclusionary or discriminatory attitudes (Boucher et al., 2010; Wright et al., 2019; Steinhardt et al., 2021). Both trajectories, therefore,

can foster the creation of “inclusive leisure contexts” (Devine & Lashua, 2002, p. 81). In conclusion, the conceptualisation of leisure according to a multidimensional approach, centred on self-determination processes, capable of following a longitudinal perspective and a network approach (Figure 1), can support the deployment of material and immaterial resources aimed at ensuring processes of active participation and inclusion in this area, guaranteeing effective and consistent support also with a view to promoting a greater sense of social cohesion (d'Alonzo & Giaconi, 2024).

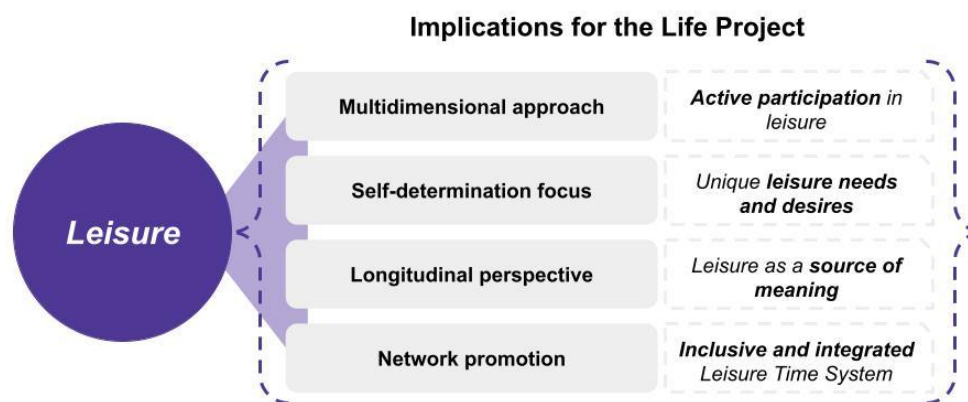


Figure 1 – Pedagogical principles for conceptualising leisure within the Life Project

Based on these considerations, it is therefore possible to emphasise the pedagogical and planning relevance of the concept of alignment, which research considers to be a key factor in the implementation of integrated actions aimed at improving the Quality of Life of people with disabilities (Giaconi, 2015; Giaconi & Del Bianco, 2025).

3.2 Alignment practices

The implementation of lifelong and lifewide care provision through the resource of the Life Project raises, from an operational point of view, the need to structure effective procedures to guide the phases of assessment, planning and monitoring of objectives (Giaconi & Del Bianco, 2025). In this sense, it is useful to refer to the concept of *alignment* (Giaconi, 2015; Cottini, 2021), considered as a central and strategic resource for educational planning and the promotion of Quality of Life (also with reference to leisure) (Giaconi, 2015). As highlighted by related studies (Giaconi, 2015; Giaconi & Del Bianco, 2025), in the field of educational care provision, it is possible to identify multiple dimensions that need to be aligned in order to ensure the effective creation and promotion of a Life Project that is also able to focus on the dimension of leisure with a view to improving Quality of Life.

Firstly, there is a need to align the functioning and needs of the person with disability with the QoL supports that can be identified in the context (Giaconi, 2015; Giaconi & Del Bianco, 2025). In this sense, the care provision for people with disabilities must consider possible discrepancies between the levels of participation in leisure and those desirable for a better Quality of Life, which can highlight unmet needs and expectations of the person and, consequently, guide the identification of appropriate supports to promote authentic and meaningful participation. As already underlined, in fact, the patterns of participation in leisure that characterise the experience of people with disabilities are affected by the presence of any contextual barriers, generating the risk of a significant gap between the leisure activities carried out by the person and those desirable based on their interests (Aitchison, 2000; Stumbo et al., 2011; Evcil, 2017; Heister et al., 2023). As highlighted by Giaconi (2015), this level of alignment allows to identify priorities for action and define the resources and supports needed to improve QoL levels in relation to leisure.

However, to pursue sustainable perspectives that comply with the principle of reasonable accommodation (UN, 2006; Fantozzi, 2022), it is also considered essential to work on the alignment between the desires, needs and expectations of the person with disability and those of their family members/caregivers and the professionals involved. As mentioned in the second chapter, harmony between these perspectives is central to the creation of meaningful, QoL-oriented experiences in leisure, drawing on aspects such as the level of involvement of the family network in this area, the attitudes of those involved in leisure experiences and the sustainability of the activities to be pursued, opening up spaces for sharing (Mactavish & Schleien, 2004; Heah et al., 2007; Badia et al., 2011a; Krieger et al., 2018; Marques et al., 2021; Steinhardt et al., 2021; Cottini, 2024b). Possible discrepancies in this area can, in fact, hinder the creation of an integrated system based on synergistic actions and shared horizons of meaning in the realisation of the Life Project.

A second level of alignment is identified in the need to orient the objectives of the interventions defined within the Life Project in light of the needs, expectations and desires inherent in the life path of the person with disability, following a coherent trajectory that considers their daily needs and the real contexts they frequent (Giaconi, 2015). In this context, leisure represents one of the dimensions of adult life towards which these interventions must strive, requiring the structuring of relevant, meaningful, functional and verifiable objectives linked to the acquisition of life skills, self-determination and self-expression (Hawkins, 1987; Beart et al., 2001; Adams et al., 2006; Giaconi, 2015; Cottini et al., 2016; Del Bianco, 2019; Lascioli & Pasqualotto, 2021; Cottini, 2024b). In this regard, we present the adaptation proposed by Giaconi (2015) of the *Goal Rating Scale* (Adams et al., 2006), which allows the definition of objectives to be guided by critical and reflective action (Schön, 1993) (Table 1). As can be seen, the tool allows

professionals to consider numerous elements for the self-assessment of objectives, grouped into cross-cutting areas.

Table 1 – Update of the objective self-assessment scheme (Giaconi & Del Bianco, 2025)

Transversal Areas	Indicators	Descriptors
Project adherence	Relevance	Are the objectives relevant and meaningful to the person in relation to their Life Project?
	Appropriateness	Are the objectives appropriate to the person's chronological age and functioning profile?
	Functionality	Are the objectives functional in terms of activity and participation in daily life and meaningful in relation to the contexts of belonging?
	Realism	Are the objectives achievable in terms of available human and material resources?
Project evidence	Observability	Can the objectives be translated into observable behaviours?
	Monitoring	Are the objectives monitorable and monitored in terms of improvement or possible decline?
	Temporality	Are the objectives time-weighted and “limited” in time to verify their achievement?
Project empowerment	Inclusion	Are the objectives functional in terms of increasing the person's autonomy and self-determination, and are they aligned with their desires/expectations?
	Participation	Do the objectives promote social participation and the building of friendships, family relationships, etc.?

Ultimately, a further level of alignment is aimed at ensuring harmony between spaces, proposed activities and the assessment methods used within the Life Project (Giaconi, 2015; Giaconi & Del Bianco, 2025). With regard to spaces, the action is aimed at verifying how these can allow for various levels of active participation, inclusion and personalisation. By way of example, we can mention the need to assess the physical and cultural accessibility of leisure contexts, highlighting the

role of environmental factors that represent the circumstances and possibilities for pursuing dimensions such as personal development, interpersonal relationships and social inclusion within them (Gray et al., 2008; Longo et al., 2020; Haythorne et al., 2022; Giaconi et al., 2024b). With regard to the activities proposed within these contexts, they should comply with principles such as appropriateness and significance in relation to the age and life context of the person with disability, favouring leisure activities in which it is possible to play a specific role, acquire skills and promote active participation in community life, in line with the recommendations of scientific literature (Armila et al., 2017; Mitchell et al., 2018; Steinhardt et al., 2021; Cottini, 2024b; Giaconi et al., 2024b). These aspects can therefore guide the identification of leisure opportunities available to the person (Cottini, 2024b). In this sense, leisure emerges as a context of life that can promote the development and enhancement of skills for adulthood (Caldin & Scollo, 2018), also based on the person's interests in terms of educational levers (Cottini, 2024b). Finally, the alignment between the Life Project and the theoretical framework of QoL also applies to the monitoring and assessment procedures of the interventions and actions carried out, favouring person-centred strategies capable of adopting a multidimensional perspective (Giaconi & Del Bianco, 2025).

Having reconstructed the main dimensions in which, according to related studies, it is considered essential to promote alignment strategies to orient interventions towards a higher Quality of Life (Giaconi, 2015; Giaconi & Del Bianco, 2025), it is now possible to proceed with an in-depth analysis of the procedures and assessment tools that allow the dimension of leisure to be operationalised in the Life Project. In addition, the main methodological challenges associated with the use of these tools will be illustrated at the end of the following sub-paragraph.

4. Assessment procedures and tools

Based on the planning trajectories of the Life Project, identified in the previous paragraphs, we now want to focus on the procedures and tools aimed at measuring the degree of participation and satisfaction of people with disabilities in relation to leisure, with the aim of providing useful insights for its operationalisation.

From a methodological point of view, studies exploring the participation of people with disabilities in leisure use both quantitative and qualitative procedures and tools, exploring habits, perceptions, needs, expectations and desires related to the leisure pursuits of people with disabilities, involving not only the person themselves but also their family members/caregivers (Boucher et al., 2010; Badia et al., 2011a; 2013a; Cantin et al., 2017; Carroll et al., 2018; Steinhardt et al., 2021) and, more rarely, the staff employed in personal services (Badia et al., 2013a; Shields & Synnot, 2014). In this regard, it should be noted that numerous studies have long focused exclusively on the perspective of the family of the person with disability, especially in the case of surveys targeting children/adolescents or people with intellectual disabilities (Beart et al., 2001; Mactavish & Schleien, 2004; Marques et al., 2021; Steinhardt et al., 2021), neglecting the perspective of the person themselves and their support staff. On the contrary, the direct involvement of people with disabilities emerges as a central trajectory for the development of richer and more in-depth interpretative paradigms, recognising and valuing the lived experiences of people with disabilities in relation to leisure (Goodley, 1999; Beart et al., 2001; Walmsley, 2004; Aitchison, 2009; Shikako-Thomas et al., 2013; Giaconi, 2015; Longo et al., 2020; Condie, 2024; Giaconi et al., 2024a).

With regard to the most commonly used assessment tools, scientific studies on leisure in the experience of people with disabilities employ a multitude of different

resources that highlight aspects relevant to educational planning (Beart et al., 2001; Rimmer et al., 2004; Vanner et al., 2008; Boucher et al., 2010; Badia et al., 2011a, 2011b; Coster et al., 2012; Shields & Synnot, 2016; Cantin et al., 2017; Carroll et al., 2018; Steinhardt et al., 2021; Haythorne et al., 2022; Cottini, 2024b). First, standardised and validated questionnaires are used, often adapted in terms of language, format or content in different research contexts³ (e.g., Daniel & Manigandan, 2005; Vanner et al., 2008; Boucher et al., 2010; Lima et al., 2012; Badia et al., 2011b, 2013b; Ullenhag et al., 2014; Imms et al., 2016b; Carroll et al., 2018). Secondly, numerous studies make use of semi-structured interviews and focus groups⁴ (e.g., Schweitzer et al., 1999; Beart et al., 2001; Rimmer et al., 2004; Coster et al., 2012; Shields & Synnot, 2016; Devine, 2004; Patterson & Pegg, 2009; Cook & Shiness, 2014; Cantin et al., 2017; Evans et al., 2017; Carroll et al., 2018; Powrie et al., 2019; Longo et al., 2020; Marques et al., 2021; Steinhardt et al., 2021; Haythorne et al., 2022; Giaconi et al., 2024a) but also research tools with a more narrative approach, such as personal diaries⁵ (e.g., Pentland et al., 1999; Aitchison, 2009; Carroll et al., 2018) or life profiles⁶ (Cottini, 2024b). Overall, these tools can be adopted jointly and complementarily, with the aim of obtaining in-depth and informed results according to integrated approaches of explanatory design (Baskerville & Pries-Heje, 2010; Haythorne et al., 2022).

In this context, the following sub-sections will present, by way of example, some specific measurement tools for leisure proposed by scientific literature (Hawkins et al., 1998; King et al., 2004; Law et al., 2006; Asher, 2007; Hawkins et al., 2008; Badia et al., 2012; Shikako-Thomas et al., 2013; Carroll et al., 2018; Marques et

³ These tools generally focus on participation patterns and leisure interests expressed by participants.

⁴ These tools are often aimed at exploring the possible presence and role of supports or limitations in leisure contexts, as well as personal needs, expectations and desires with regard to participation in this area.

⁵ These tools enable researchers to document choices, behaviours, practices and/or needs in relation to leisure in your daily experience.

⁶ This tool can return activities, contexts and skills involved in leisure.

al., 2021; Steinhardt et al., 2021). These tools can represent useful resources for assessment, planning and monitoring activities related to the Life Project.

4.1 Questionnaires

With reference to questionnaire, there are three tools that the literature provides us with to assess the leisure experiences of people with disabilities, which are validated and allow us to work in line with the planning trajectories of the Life Project.

The first tool is the *Leisure Assessment Inventory* (LAI) (Hawkins et al., 1998; Asher, 2007; Hawkins et al., 2008), which is aimed at adults and allows us to work in line with the Quality of Life framework proposed by Schalock and Verdugo Alonso (2002, 2006) (Badia et al., 2012). The second and third tools, respectively the *Children's Assessment of Participation and Enjoyment* (CAPE) and the *Preferences for Activities of Children* (PAC), are a pair of complementary tools that allow the assessment of the participation of children and adolescents with or without disabilities in leisure activities (King et al., 2004, 2006).

4.1.1 The Leisure Assessment Inventory

As anticipated, the *Leisure Assessment Inventory* is a questionnaire that measures the leisure behaviour of adults with the aim of evaluating and designing interventions to promote participation in leisure activities. In detail, as illustrated by research (Hawkins et al., 1998; Asher, 2007; Hawkins et al., 2008), the LAI supports the identification of significant trajectories to promote the development of leisure skills, personal wellbeing in leisure contexts, community involvement, empowerment and inclusion through leisure, including a longitudinal perspective

(Hawkins et al., 2008). For these reasons, the insights gathered through the LAI can provide guidance to people with disabilities, caregivers, and professionals to orient leisure participation towards higher levels of Quality of Life within the Life Project, directing the planning of interventions towards concrete needs, expectations, and desires (Badia et al., 2012). Specifically, the LAI consists of four complementary indices, each with a different focus on the dimension of leisure (Hawkins et al., 1998; Asher, 2007; Hawkins et al., 2008):

- *Leisure Activity Participation Index (LAP)*: an index aimed at measuring the degree of involvement of the person in various leisure activities, providing a list of leisure activities in which the person participates. This component focuses on assessing the person's current level of involvement in leisure, providing a snapshot of their participation and inclusion in this area;
- *Leisure Preference Index (L-PREF)*: an index designed to measure a person's preferences with regard to leisure activities, allowing them to appreciate, among the leisure activities carried out, those in which they would like to participate to a greater extent. This component focuses on the importance and meaning that leisure activities have for the person, from the perspective of self-determination and expression of personal inclinations.
- *Leisure Interest Index (L-INT)*: an index designed to identify potential areas of involvement that are not yet satisfied, returning the leisure activities that the person does not currently participate in or cannot participate in, but would like to pursue based on their interests. This component focuses on the person's priorities for action and aspirations, guiding the structuring of goals for more meaningful leisure participation;
- *Leisure Constraints Index (L-CON)*: an index designed to identify personal and environmental factors that may hinder participation in preferred leisure

activities and contexts, indicating the degree to which freedom in the choice of leisure activities may be limited by the presence of any obstacles. This component allows us to focus on the level of accessibility and the support provided by the context in relation to the specific needs of the individual.

The questionnaire is administered in an interview format lasting an average of 45 minutes and is divided into three parts. In the first part, 53 questions are asked, each relating to a specific leisure activity illustrated on a card. After identifying and presenting the leisure activity depicted on the card, the administrator asks the participant if they have participated in that activity in the last year and, if so, whether they would like to participate less frequently, equally frequently or more frequently. After reviewing all the images, the administrator asks the participant whether, among the leisure activities in which the person has not participated in the last year, there are any activities in which they would like to participate and in which they have an interest (Table 2).

Table 2 – Example of LAI questionnaire score sheet (Adapted from Badia et al., 2011b)

		Activity	Preference				Interest	
Item	Description	Yes	Less	Same	More	Not performed	Yes	No
1	Talking on the phone							
2	Resting							
3	Reading							
4	Board games							

In the second part, participants are asked 20 questions concerning the barriers that prevent them from participating in the leisure activities indicated above as desirable (Table 3). As can be seen from the table, the questions asked refer to the many factors that can have a significant impact on levels of participation in the leisure experiences mentioned in the second chapter, such as the availability of adequate financial and time resources, the attitudes of those involved, the accessibility of contexts, and so on (Gray et al., 2008; Longo et al., 2020; Haythorne et al., 2022; Giaconi et al., 2024a). In the third and final part, participants are asked a number of open-ended questions on topics such as work, interpersonal relationships, family support and ageing (Badia et al., 2011b).

Table 3 – Questions on restrictions on participation in leisure activities from the LAI questionnaire (Adapted from Badia et al., 2011b)

0	1	
They do have it	They do not have it	1. Do you have enough time to do these things or not? If not, why don't you have enough time?
They do have it	They do not have it	2. Do you not have enough money to do these things?
They are not afraid	They are afraid	3. Are you afraid of making a mistake doing these things or not?
They do have someone	They do not have anyone	4. Do you have someone to do these things with or not?
They do know	They do not know	5. Do you know how to do these things or not?
Any person	Only with friends	6. Would you do these things with any person you know or only with friends?
They do not feel too old	They do feel too old	7. Do you feel too old to do these things or not?
They do not feel too little in health	They do feel too little in health	8. Do you feel too little in health to do these things or not?
They do have it	They do not have it	9. Do you have a means of transport to do these things or not?

They would not feel guilty	They would feel guilty	10. Would you feel guilty or unhappy for having done these things or not?
They would be good	They would not be good	11. Do you think you would be good at doing these things or do you feel like you would not?
They are not afraid	They are afraid	12. Are you not afraid of hurting yourself by doing these things or are you?
They would think it is okay	They would think it is not okay	13. Would your family or friends think that it is not okay for you to do these things, or would they think it is?
They are not too tired	They are too tired	14. Are you not too tired to do these things or are you?
It is their choice	It is someone else's choice	15. Are you choosing to do these things yourself or is it someone else?
They do have it	They do not have it	16. Do you not have the necessary equipment to do these things or not?
They do have it	They do not have it	17. Do you not have a place in which to do these things or not?
They do have someone	They do not have someone	18. Do you have someone to teach you how to do these things or not?
They move easily	Trouble	19. Do you have trouble doing these things because it is difficult to move around within or outside the facilities, or can you move easily?
They are not afraid	They are afraid	20. Are you afraid that others will make fun of you if you do these things?
		Total:

Overall, the tool allows for the measurement of a score on four separate scales (relating to the four components) and is also designed for progressive measurements over time (Asher, 2007): the LAP, in fact, captures the levels of participation of the person in leisure contexts and allows for the assessment of changes in the leisure repertoire that may occur over time and throughout the person's life, from a longitudinal perspective (Montobbio & Lepri, 2000; Badia et al., 2011b; Caldin & Giaconi, 2021). The L-PREF and L-INT indices, in parallel, are sensitive to the level of self-determination in individual leisure, measuring preferences,

expectations and personal needs to promote trajectories of empowerment in planning (Del Bianco, 2019). Finally, the L-CON index allows for a multidimensional approach to consider all the factors that may hinder the achievement of a better QoL in relation to leisure contexts (Giacconi, 2015; Longo et al., 2017; Steinhardt et al., 2021). Together, the four indices allow the person's leisure experience to be assessed according to a global approach, offering key insights for the planning of personalised interventions (Badia et al., 2012).

Among the potential benefits of the LAI highlighted by studies (Asher, 2007) are its ease of application thanks to its standardised procedure and the generalisability of the indices for conducting large-scale assessments. Among the critical issues, it can be seen that the reference to a pre-established and limited repertoire of activities can restrict the breadth and depth of the survey on leisure participation by people with disabilities, representing a non-personalised and potentially obsolete list in light of the constant renewal in the landscape of leisure activities, which are constantly increasing (Roberts, 2006). In this sense, it is possible that the person is involved in leisure activities not represented in the LAI.

The Leisure Assessment Inventory can be used to assess the participation in leisure activities of adults with or without disabilities, and has been validated and applied to assess the dimension of leisure in the experience of adults with intellectual disabilities (Hawkins et al., 1998). The tool has also been adapted and validated in the Spanish context (Badia et al., 2012; 2013a).

4.1.2 The Children's Assessment of Participation and Enjoyment and the Preferences for Activities of Children

With regard to the assessment of leisure experiences of children and adolescents with and without disabilities (aged 6–21), as mentioned above, it is relevant to present the *Children's Assessment of Participation and Enjoyment* (CAPE) and the

Preferences for Activities of Children (PAC) (King et al., 2004, 2006; Law et al., 2006). Specifically, the CAPE allows for the assessment of children's and adolescents' leisure participation according to five domains (*diversity, intensity, with whom, where, enjoyment*) (Table 4). It can be administered in the form of a self-assessment or interview: the child/adolescent (supported by a proxy if necessary) can evaluate a series of 55 leisure activities (items) illustrated on cards, following the domains mentioned above and detailed below:

- *Diversity*: aimed at determining whether the child/adolescent has participated in the leisure activity illustrated on the card in the last 4 months, through a “yes”/‘no’ answer;
- *Intensity*: aimed at determining, in the case of an affirmative answer, how frequently they have participated in this leisure activity, by assigning a score on a scale from 1 (“only once”) to 7 (“once or more times a day”);
- *With Whom*: aimed at determining, in the case of an affirmative answer, with whom the child/adolescent participated in this leisure activity most frequently, choosing from the options “alone”, “with family”, “with a relative”, “with friends”, “with others”;
- *Where*: aimed at identifying, in the case of an affirmative response, where the respondent most frequently participated in this leisure activity, choosing from the options ‘at home’, ‘at a relative's house’, ‘in my neighbourhood’, ‘at school (but not during lessons)’, ‘in my community’, ‘outside my community’;
- *Enjoyment*: aimed at identifying, in the case of an affirmative response, how much they enjoyed this leisure activity, by assigning a score on a scale from 1 (‘not at all’) to 5 (‘very much’).

Table 4 – Example of CAPE questionnaire score sheet referring to the first 8 items of the tool

(www.canchild.ca)

CAPE Summary Score Sheet						
Activity Type and Overall Scores Child's name _____ Date _____						
<i>Directions: Record the child's CAPE item responses in the space provided for each dimension of activity. The possible range of scores for each dimension is provided. Remember, if the Diversity Score for an item is 0, there will be no other scores recorded for that item. Use the scoring directions to calculate the child's CAPE Overall Scores, and plot the Overall Scores on the number lines provided.</i>						
Diversity	0 (No); 1 (Yes)					
Intensity	1 (1 time in the past 4 months); 2 (2 times in the past 4 months); 3 (1 time a month); 4 (2-3 times a month); 5 (1 time a week); 6 (2--3 times a week); 7 (1 time a day or more)					
With Whom	1 (Alone); 2 (With family); 3 (With other relatives); 4 (With friends); 5 (With others)					
Where	1 (Home); 2 (Relative's home); 3 (In your neighborhood); 4 (At school but not during classes); 5 (In your community); 6 (Beyond your community)					
Enjoyment	1 (Not at all); 2 (Somewhat, sort of); 3 (Pretty much); 4 (Very much); 5 (Love it)					

CAPE Item Number	Item Description	Diversity	Intensity	With Whom	Where	Enjoyment
1	Doing puzzles					
2	Playing board or card games					
3	Doing crafts, drawing or coloring					
4	Collecting things					
5	Playing computer or video games					
6	Talking on the phone					

7	Going to a party					
8	Hanging out					

The PAC, on the other hand, focuses on the child/adolescent's preferences with regard to such leisure activities. During administration, the child/adolescent (supported by a proxy if necessary) is asked to evaluate each activity presented in the CAPE and represented by the 55 cards by answering the question “If you could do anything in the world, how much would you like to be doing this specific activity?” (Shikako-Thomas et al., 2013, p. 2623). The 55 items are organised into five types of activities (*Recreational Activities, Social Activities, Physical Activities, Skill-based Activities, Self-improvement Activities*). The child/adolescent can group the cards by arranging them into three piles, corresponding to three groups: “Would not like to do at all” (score = 1), “Would sort of like to do” (score = 2), “Would really like to do” (score = 3). The tool allows, based on the grouping made by the child/adolescent, to calculate an average score for each type of activity and an overall score (Table 5).

Table 5 – Example of PAC questionnaire scorecard referring to the first type of items
(Recreational Activities) (www.canchild.ca)

PAC Summary Score Sheet		
Activity Type and Overall Scores		
Child's name _____ Date _____		
Directions: The 55 PAC items are categorized by the five Activity Types. Locate each PAC item number in one of the Activity Type categories and record the child's response. The possible PAC Preference Scores range from 1–3. Follow the scoring directions for each Activity Type to calculate the child's PAC Activity Type and Overall scores.		
Recreational Activities		
PAC Item Number	Item Description	Score
1	Doing puzzles	
2	Playing board or card games	
3	Doing crafts, drawing or coloring	
4	Collecting things	
5	Playing computer or video games	
12	Playing with pets	
14	Doing pretend or imaginary play	
15	Playing with things or toys	
32	Going for a walk or a hike	
36	Playing on equipment	
44	Watching TV or a rented movie	
55	Taking care of a pet	
Recreational activities sum		(____) /12

The results provided by CAPE allow us to detect the diversity of leisure activities in which the child/adolescent has participated (*diversity*), the frequency of participation in these activities (*intensity*), the figures and contexts involved in this participation (*with whom and where*) and the level of involvement and enjoyment

of these activities (*enjoyment*). The results provided by PAC, on the other hand, allow us to measure the preferences of the child/adolescent, both through the calculation of continuous variables (King et al., 2004; Shikako-Thomas et al., 2013). Together, the two tools are able to provide a detailed picture of the levels of participation of the child/adolescent with disability in leisure, offering the possibility of structuring a Life Project that is situated and able to consider the uniqueness of their experiences, needs and expectations through targeted interventions (Giacconi & Del Bianco, 2025). However, even in this case, it is possible to note that the use of a predetermined list of leisure activities for analysis may limit the recognition of the experiences lived by the child/adolescent in this dimension.

The CAPE and PAC have been widely applied and validated by numerous studies on the leisure participation of children and adolescents with different functioning profiles and in different cultural contexts (King et al., 2004, 2006; Imms, 2008; Bult et al., 2010; Ullenhag et al., 2012; Potvin et al., 2013; Shikako-Thomas et al., 2013; Longo et al., 2014; Fink et al., 2016; Imms et al., 2017; Almasri et al., 2019): these studies highlight how CAPE and PAC can be an effective resource for the assessment and design of interventions aimed at raising the levels of active participation and social inclusion of children and adolescents with disabilities in their free time.

4.2 Interviews and focus groups

Among the semi-structured interview proposals used in the literature, we can mention the guide proposed by Coster et al. (2012) and adapted by Steinhardt et al. (2021, p. 124), which breaks down the Leisure Time survey tool into three target

groups: parents, professionals, and children/adolescents with disabilities, as illustrated in Table 6.

Table 6 – Interview to map the experience of leisure according to the perceptions of parents, professionals and children/adolescents with disabilities (Steinhardt et al., 2021, p. 124)

	Parents	Professionals	Children/youth
1	<i>What does “participation” mean to you?</i>		
2	What kind of leisure activities does your child participate in at home, with friends, or in other organized or unorganized settings?	What kind of leisure activities do you think children with or without disabilities participate in at home, or in other organized or unorganized settings?	What kind of activities do you do at home, with friends or somewhere else during your leisure time? a - Are there any activities you do, that you actually don't want to do? b - Are there any activities you would like to do, but you can't do thus far? Why is that?
3	How do you evaluate your child's participation? a - What are the key aspects to evaluate participation? b - If you take an activity we mentioned before, what will give you the sense that your child is participating?	How do you evaluate a child's participation?	
4	<i>What facilitates your child's participation in leisure activities?</i> <i>a - Which factors are helping (e.g., persons, physical environment, equipment, strategies, time...)?</i> <i>b - In what kind of situations do these factors help your child participate?</i>	<i>Which factors do you think can help children and youth with disabilities to participate in leisure activities?</i> <i>a - Which factors are helping (e.g., persons, physical environment, equipment, strategies, time...)?</i> <i>b - In what kind of situations do these factors help the child</i>	<i>What helps you to make it easy and fun to participate?</i> <i>a - Are there any persons, equipment or other things that help you?</i> <i>b - Is it the same in all activities you do, or do things vary between activities?</i>

		<i>participate?</i>	
5	<i>What factors hinder your child from participating in leisure activities?</i> <i>a - What kind of challenges or barriers are there (e.g., persons, physical environment, equipment, time...)?</i> <i>b - In what kind of situations do these factors help your child participate?</i>	<i>Which factors do you think hinder children and youth with disabilities from participating in leisure activities?</i> <i>a - What kind of challenges or barriers are there (e.g., persons, physical environment, equipment, time...)?</i> <i>b - In what kind of situations do these factors help the child participate?</i>	<i>What makes it difficult or boring to participate?</i> <i>a - Are there any persons, or other circumstances that make it difficult or boring for you to participate?</i> <i>b - Is it the same in all activities you do, or you would like to do, or do things vary between activities?</i>
6	<i>If you could design a questionnaire for children about participation in leisure activities, what would it look like (e.g., use of pictures, pictograms, symbols, language...)?</i>	<i>If you could design a questionnaire for children about participation in leisure activities, what would it look like (e.g., use of pictures, pictograms, symbols, language...)?</i>	<i>If you could decide what the new questionnaire should be and look like, what would be important for you ?</i>
7	<i>Is there something else we haven't discussed today that you want to talk about?</i>	<i>Is there something else we haven't discussed today that you want to talk about?</i>	<i>Is there anything else you think we should talk about today?</i>

As can be seen from reading the items, the tool allows for the investigation of the construct of participation, the identification of facilitators and barriers in the leisure experience, as well as expectations, needs and desires in relation to leisure activities, reconstructing the perspectives of children/youth with disabilities and those involved in their care provision (Felce & Perry, 1995; Wright et al., 2019; Giaconi et al., 2024a).

Numerous studies on leisure also use focus groups to explore subjective perceptions and gain insights into the views of people with disabilities and their caregivers regarding levels of participation in this area (Beart et al., 2001; Marques et al., 2021; Haythorne et al., 2022). The study proposed by Beart and colleagues (2001), which aimed to investigate the leisure experiences of young people and

adults with intellectual disabilities, proposes the following guiding questions (p. 135):

- *What activities are you doing now?*
- *What allows you to do these activities?*
- *What things would you like to try which you aren't doing now?*
- *What stops you from doing what you would like to do?*

Similarly, Marques et al. (2021, p. 2) propose the following guiding questions for conducting focus groups with children with different types of disabilities:

- *Do you participate in leisure activities? Which ones?*
- *In your opinion, what hinders your participation in leisure activities?*
- *In your opinion, what facilitates your participation in leisure activities?*
- *Is there any leisure activity that you would like to participate in but you do not?*

In this second case, the same questions were adapted and also addressed to the participants' parents (by phrasing them in the third person). In both studies, the focus groups were supported by the use of cards illustrating various leisure activities (e.g., people going to the park, to the cinema, or participating in a sport) as a visual aid and stimulus for discussion (Beart et al., 2001; Marques et al., 2021). As can be seen, the items proposed by the authors refer to the dimensions investigated by the questionnaires presented above, exploring possible discrepancies between current and potential levels of participation in leisure, as well as the needs, expectations and desires that are central to guiding educational planning.

As highlighted by studies (Beart et al., 2001; Marques et al., 2021), interviews and focus groups, on the whole, allow us to capture a snapshot of a person's leisure experience in a less structured way, giving greater space to the expression of

personal needs, expectations and desires on a qualitative level. These aspects therefore allow for a greater level of insight, also in light of the possibility of integrating multiple sources of information and capturing nuances and details that risk being overlooked through the application of exclusively quantitative measures. This type of tool therefore offers insights that can guide alignment practices towards joint project responsibility and synergistic action (Felce & Perry, 1995; Wright et al., 2019; Giaconi et al., 2024b). However, the literature highlights how the use of tools such as interviews and focus groups makes the evaluation process more time-consuming and resource-intensive, underlining the need to adopt rigorous analysis practices to avoid the risk of bias in the interpretation of the data collected (Carroll et al., 2018).

4.3 The leisure diary

Finally, some studies on the importance of leisure in the lives of people with and without disabilities have used diaries as a qualitative research tool (Carroll et al., 2018). According to scientific literature, the use of leisure diaries allows perceptions and experiences related to leisure to be recorded over a given period of time, gathering contextualised insights and detecting behaviours in real settings (Pentland et al., 1999; Zijlstra & Vlaskamp, 2005; Carroll et al., 2018). In this direction, these aspects make the diary an effective tool for capturing the main aspects related to leisure participation, even from a longitudinal perspective, recording habits, practices and any changes in the life of the person with disability (Carroll et al., 2018).

As highlighted by research (Zijlstra & Vlaskamp, 2005; Carroll et al., 2018; Heister et al., 2023), the leisure diary can be structured in different formats

depending on the areas to be explored, including, for example, questions about the type of leisure activities carried out, the frequency and duration of these activities, the place and time of day they are carried out, and the number and role of any people involved. The tool can be applied in a self-assessment form (with the support of a proxy where necessary) or hetero-assessment form, and can be adapted according to accessibility requirements (such as size and contrast for participants with low vision) to ensure independent use by the person (Carroll et al., 2018). Table 7 shows, by way of example, the one-day diary template used in the study by Carroll et al. (2018, p. 5):

Table 7 – One-day diary template (Carroll et al., 2018, p. 5)

Day of the week:		
Please tell us where you went (e.g., home, shop, park, friend's house)	How did you get there? (tick ☒)	Who did you go with? (tick ☒)
First:	☐ Taxi ☐ Car ☐ Walk ☐ Bike ☐ Scooter/Skateboard ☐ Bus/Train/Ferry ☐ Wheelchair ☐ Mobility scooter Other (please write): _____	☐ I was by myself ☐ Parent/Family adult ☐ Carer/Support person ☐ My friends ☐ Brother/Sister Other (please write): _____
Next place:	☐ Taxi ☐ Car ☐ Walk ☐ Bike ☐ Scooter/Skateboard ☐ Bus/Train/Ferry ☐ Wheelchair ☐ Mobility scooter Other (please write): _____	☐ I was by myself ☐ Parent/Family adult ☐ Carer/Support person ☐ My friends ☐ Brother/Sister Other (please write): _____

Next place:	☐ Taxi ☐ Car ☐ Walk ☐ Bike ☐ Scooter/Skateboard ☐ Bus/Train/Ferry ☐ Wheelchair ☐ Mobility scooter Other (please write): 	☐ I was by myself ☐ Parent/Family adult ☐ Carer/Support person ☐ My friends ☐ Brother/Sister Other (please write):
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Although the free time diary tool is used less frequently in the reference literature, studies recognise its potential for capturing the authenticity of personal experiences and revealing temporal dynamics thanks to its applicability in longitudinal studies, allowing habits and experiences to be recorded flexibly and effectively (Pentland et al., 1999; Bolger et al., 2003; Zijlstra & Vlaskamp, 2005; Carroll et al., 2018). The high degree of personalisation of this tool can also be a significant asset for monitoring the objectives set out in the Life Project, ensuring forms of assessment that are aligned with the specific needs of the individual and the planned interventions (Aitchison, 2009; Giaconi, 2015; Giaconi & Del Bianco, 2025). Among the critical issues of this tool, however, Pentland and colleagues (1999) point out that it is resource-intensive, requiring continuous and substantial commitment on the part of the person with disability or their caregivers to collect information.

4.4 Methodological challenges

From an operational point of view, measuring the leisure experiences of people with disabilities poses a series of procedural challenges that need to be addressed

(Giaconi, 2015). As mentioned above, this sub-section will highlight the main methodological challenges relating to the application of the tools presented above.

Firstly, numerous studies highlight the need to adopt accessible assessment tools and procedures (Carroll et al., 2018), calling on researchers to develop and apply assessment solutions that can meet the requirements identified by the scientific community (Lewis & Porter, 2004; Giaconi, 2015). In this context, studies identify the need to explore the subjective experiences and levels of satisfaction of participants with intellectual disabilities or complex disabilities in self-assessment, with regard to the quality of their living conditions, as one of the major methodological challenges (Giaconi, 2015; D'Angelo, 2020). As demonstrated by previous studies (Giaconi, 2015), it has been found that “yes/no”, multiple-choice or fill-in-the-blank questions may not guarantee reliable results in the case of people with intellectual disabilities, as may the use of visual aids. In this regard, scientific literature (King et al., 2004; Verdugo Alonso et al., 2005; Yalon-Chamovitz et al., 2006; Verdugo Alonso et al., 2020; Marques et al., 2021) encourages the provision of alternative or augmentative communication devices to facilitate self-reporting practices by providing support for representation and interaction, promoting accessibility to such forms of self-assessment.

Another challenging aspect that emerges in the literature is the levels of satisfaction perceived by people with disabilities and expressed through these tools: studies show, indeed, that people with disabilities tend to indicate high levels of satisfaction even in less comfortable living situations, having generally lower expectations due to their past experience (Beart et al., 2001; Giaconi, 2015). Personal experience, therefore, can generate a real “downward pull effect” (Giaconi, 2015, p. 48) on one's expectations of QoL, leading people to settle for unsatisfactory conditions. This aspect requires not only a critical approach to the collection and analysis of the perspectives of people with disabilities, but also

verification of the scientific reliability of perspectives expressed by family members, professionals or other proxies who are involved in order to integrate multiple sources of information (Giaconi, 2015). Therefore, as mentioned at the beginning of this paragraph, it is important to consider, in the case of joint analysis, elements such as possible distortions in responses, discrepancies between perceptions, and the degree of agreement or disagreement between the perspectives expressed by each source in relation to the leisure experience of the person with disability (Verdugo Alonso et al., 2012). In this regard, for these reasons, we conclude by reiterating one of the methodological principles capable of responding to these challenges, namely triangulation procedures, which are also considered essential in the alignment work described above (Brown, 2001; Shikako-Thomas et al., 2013; Giaconi, 2015; Shields & Synnot, 2016; Cantin et al., 2017; Longo et al., 2017; Carroll et al., 2018; Wright et al., 2019; Steinhardt et al., 2021). In detail, the triangulation of observation or information sources, also based on a combination of self- and hetero-evaluation, can facilitate a comparison based on the criteria of convergence, complementarity or divergence of the findings, promoting an analysis that is as authentic and detailed as possible with regard to the levels of quality and inclusion in leisure (Giaconi, 2015).

Finally, we highlight the challenges associated with the translation and validation of the tools presented in different linguistic and cultural contexts, which opens up work trajectories oriented towards the effective and context-specific use of the measurement tools offered by scientific research, highlighting the need to adapt meanings and contents according to the context of reference.

5. Trajectories for inclusive leisure

In light of what has been explored throughout the first three chapters, it seems useful to reflect on some aspects that represent critical areas of work for promoting the full participation and social inclusion of people with disabilities in leisure activities, and which will be addressed in the experimental section of this work, illustrated in chapters five and six.

Firstly, it is worth recalling, among the most relevant horizons for inclusive planning, the concept of co-design, understood here as a central resource both for the construction of the entire Life Project and for the structuring of inclusive leisure experiences, allowing for the creation of informed interventions situated in real contexts, capable of aligning with needs, expectations, and perspectives based on dialogue and exchange between all actors involved (Sarmiento-Pelayo, 2015; Giaconi et al., 2019; Giaconi & Del Bianco, 2025). For these reasons, co-design can promote processes of ownership and self-determination (Del Bianco, 2019; May, 2024), highlighting how collaboration between leisure professionals, caregivers and people with disabilities themselves can generate in-depth knowledge enriched by the encounter of different expertise and personal experiences (Haythorne et al., 2022). In this direction, leisure activities and contexts can be rethought to accommodate not only the needs of people with disabilities, but also those of their caregivers, promoting the feasibility and sustainability of leisure experiences with a view to alignment (Giaconi, 2015). For these reasons, the co-design of leisure experiences represents a privileged resource and urgent need for promoting the active participation and social inclusion of people with disabilities, allowing the reinterpretation of accessibility paradigms to highlight their relational and social value (Titchkosky, 2011).

Secondly, in line with the possibility of working to create inclusive leisure contexts and experiences, our reflections emphasise the central importance of inclusive training for professionals and operators involved in leisure experiences

(UN, 2006). Studies in the literature (Shields & Synnot, 2014; Haythorne et al., 2022; Giaconi et al., 2024b) confirm, as mentioned earlier, that they have a central role and value in facilitating participation in leisure, highlighting the need to acquire knowledge, skills and approaches aligned with the principles of quality of life, the bio-psycho-social approach to disability, rights and capabilities in order to accompany people with disabilities, ensuring quality and meaningful experiences (Giaconi, 2015). The absence of inclusive training, as highlighted, can create a significant gap in terms of knowledge and skills, affecting the ability of professionals to ensure a welcoming and accessible environment for people with disabilities (UN, 2006; Shields & Synnot, 2014). Furthermore, as previously emphasised, the organisational culture itself must be aligned with the dimensions of accessibility and inclusion, becoming part of a territorial network based on synergy and shared responsibility in the care provision for people with disabilities (Giaconi & Del Bianco, 2025). In this context, it can be said that the actions included in the Life Project extend to “envisaging the conditions under which contexts and organisations can redefine themselves” (Medeghini, 2006, p. 10), taking on a systemic and integrated dimension. Therefore, there is a need to promote a shift from the mere development of leisure services in the community to rethinking them as resources for community development (Aitchison, 2009; Giaconi & Del Bianco, 2025), providing new paradigms for inclusion and enhancing this dimension as a source of individual and collective wellbeing (Giaconi, 2015; Giaconi et al., 2024a; Giaconi & Del Bianco, 2025).

6. Summary and implications

This chapter has allowed us to examine—starting from the trajectories offered by studies in Special Pedagogy and Legislative Decree 62/2024—the dimension of leisure within the Life Project, with the aim of identifying conceptual trajectories and operational tools capable of supporting its integration within integrated actions and interventions oriented towards the Quality of Life of people with disabilities and their families (Giaconi, 2015; Giaconi & Del Bianco, 2025).

Firstly, the Life Project was explored as an operational resource capable of providing a harmonious and integrated framework within which to encompass actions, interventions and support aimed at promoting personal development, the acquisition of skills and social participation, in line with the needs, interests and aspirations of the individual (Giaconi, 2015; Cottini et al., 2016). In detail, the pedagogical assumptions, objectives and characteristics of the Life Project were highlighted, emphasising how this tool is based on a comprehensive, longitudinal and dynamic approach, with the ultimate goal of allowing each person to express their existential potential (Ianes & Cramerotti, 2009; Pavone, 2009; Mura, 2016; Giaconi & Del Bianco, 2025).

Once this frame of reference was outlined, it was possible to proceed with an in-depth analysis of leisure in terms of a strategic dimension for the Life Project, following the guidelines of Legislative Decree 62/2024 and the evidence from Special Pedagogy studies. In this direction, the pedagogical principles necessary to conceptualise leisure in light of the Life Project were highlighted: these include the adoption of a multidimensional approach to ensure full participation in leisure experiences (Giaconi, 2015; Cottini, 2024b; Giaconi & Del Bianco, 2025); the promotion of self-determination in recognising unique needs and desires related to leisure (Del Bianco, 2019; Haythorne et al., 2022); the pursuit of a longitudinal perspective based on the framing of leisure as a dynamic source of meaning for everyone's life (Montobbio & Lepri, 2000; Caldin & Giaconi, 2021); the

enhancement of the network to create an inclusive and integrated leisure time system (Devine & Lashua, 2002; d'Alonzo & Giaconi, 2024). Subsequently, we proceeded to explore alignment as a central strategy for designing effective interventions and support in the area of leisure (Giaconi, 2015; Giaconi & Del Bianco, 2025). Specifically, three levels of alignment were examined: the alignment between functioning, the needs of the person with disability, and the QoL supports identifiable in the context; the alignment between the objectives and needs, expectations, and desires of the person and their caregivers; and the alignment between the spaces, proposed activities, and assessment methods designated in the Life Project.

Ultimately, based on the defined trajectories, a focus was proposed on procedures and assessment tools aimed at measuring the participation of people with disabilities in leisure. Specifically, examples of validated questionnaires (Hawkins et al., 1998; King et al., 2004, 2006; Asher, 2007; Hawkins et al., 2008; Badia et al., 2012), interview and focus group guidelines (Marques et al., 2021; Steinhardt et al., 2021), and narrative diaries (Carroll et al., 2018) were presented. For each type of tool, the key aspects, potential and limitations identified in the scientific literature were presented. In light of the tools illustrated, the main methodological challenges related to measuring the level of participation and satisfaction in leisure by people with disabilities and their caregivers were then explored, highlighting aspects such as the need to adopt accessible assessment tools and procedures, the value of triangulation as a resource for integrating multiple sources of observation or information, as well as issues related to the translation and validation of tools.

Based on these considerations, we finally highlight co-design and inclusive training as two core trajectories envisioned in the Life Project and the care provision

for people with disabilities, which will be further explored through the experimental section of this work in the following chapters.

Overall, the findings invite us to recognise leisure as an area of pedagogical importance for the care provision for people with disabilities, allowing us to focus on a meaningful space within the Life Project to guide practices and interventions in the field of leisure from both a conceptual and practical point of view.

5. The research: museum accessibility for inclusive leisure and Quality of Life

1. Foreword

The previous chapters helped us reflect upon the nature of leisure—its meanings, its opportunities, its barriers—in relation to the Quality of Life of people with disabilities (Schalock et al., 1989; WHO, 1995; Felce & Perry, 1995; Renwick & Brown, 1996; Cummins, 1997b; Schalock & Verdugo Alonso, 2002, 2006; Giaconi, 2015; Giaconi & Del Bianco, 2025). To this end, the theoretical frameworks and operational trajectories related to the intersection between leisure, Quality of Life and the Life Project (Ianes & Cramerotti, 2009; Pavone, 2009; Mura, 2016; Giaconi & Del Bianco, 2025)—presented earlier in this work—represent the foundational basis for the research that will be illustrated in this chapter, which is related to the promotion of inclusive leisure experiences through the creation of integrated solutions for museum accessibility.

Specifically, Special Pedagogy's take on the topic of leisure contributes to the definition of this concept as something more than merely “free time” or a blank space between commitments of other nature, acknowledging how this dimension encompasses relevant opportunities for self-expression and self-determination, personal development, emotional wellbeing, community belonging, and so on (Badia et al., 2013b; Giaconi & Del Bianco, 2025). In this sense, as scientific

literature proves how leisure can represent a transformative and generative dimension, its pedagogical meaning notably emerges, allowing us to understand how leisure itself can promote existential paths aimed towards an authentic Quality of Life while serving as a lever to promote a culture of inclusion across communities and life environments (Aitchison, 2003, 2009; Iso-Ahola & Baumeister, 2023; Cottini, 2024b; Giaconi & Del Bianco, 2025).

As retraced throughout chapters two, three, and four, scientific literature highlights several challenges that are faced by people with disabilities and their caregivers in experiencing the dimension of leisure in conditions of full participation, social inclusion, and alignment with personal meanings and values (Beart et al., 2001; Aitchison, 2003; Cook & Shinew, 2014; Pagán-Rodríguez, 2014; Myers & Raveslout, 2016; Marques et al., 2021; Shandra, 2021; Aguilar-Carrasco et al., 2023). Issues related to personal choice, accessibility, inclusive training and structural barriers emerged as urgent questions to be addressed (Aitchison, 2003; Pagán-Rodríguez, 2014; Cottini, 2024b). To this end, it was possible to highlight how the creation of Life Projects that can be sustainable and meaningfully oriented towards QoL raises the need to pursue two fundamental trajectories (Giaconi, 2015; Giaconi & Del Bianco, 2025):

- The enhancement of co-design experiences between institutions, researchers, leisure professionals, people with disabilities and communities;
- The promotion of inclusive training for leisure personnel as a means to increase knowledge, competences and inclusive agency.

As co-design experiences can contribute to the creation of shared spaces for reflection, innovation, and inclusion in leisure (Giaconi et al., 2024a; Giaconi & Del Bianco, 2025), the promotion of inclusive training can support leisure professionals in understanding and responding to people's needs, supporting

awareness and self-efficacy in their everyday work (Shields et al., 2012; Shields & Synnot, 2014; Armila et al., 2017; Marques et al., 2021; Giaconi et al., 2024a). As a result, it becomes evident how these trajectories can jointly contribute to the increase of meaningful opportunities to engage in leisure contexts for people with disabilities, ensuring active participation, social inclusion and accessibility. Accordingly, we believe that the design of leisure contexts and experiences should be oriented towards the Framework of Quality of Life and a Special Pedagogy-informed reading, promoting systemic change through the direct involvement of people with disabilities and the spread of a culture of inclusion (Canevaro, 2006; Bocci, 2020; Caldin, 2022; Giaconi et al., 2023; Cottini, 2024b; Giaconi & Del Bianco, 2025).

The promotion of pedagogical interventions able to respond to people with disabilities' and their caregivers' needs in leisure contexts means, in this perspective, putting into play community engagement, professional competences and shared meanings to generate effective educational actions (Ianes & Cramerotti, 2009; Pavone, 2009; Caldin & Giaconi, 2021; Canevaro et al., 2021). As a consequence, the promotion of research paths able to provide concrete solutions and strategies to promote inclusion of people with disabilities requires a pedagogical sensitivity oriented towards ensuring social impact through a systemic approach (Giaconi, 2015; Giaconi & Del Bianco, 2025).

Building upon these considerations, the research presented in this work, which was conducted by the research group in Special Pedagogy of the University of Macerata, represents an attempt to implement the theoretical and operational trajectories related to the promotion of inclusive leisure contexts with the aim of increasing the Quality of Life of people with disabilities, with a specific focus on cultural life participation. Accordingly, the present chapter is structured as follows. Firstly, we will provide a background on the topic of museum accessibility,

highlighting key concepts, legislative backgrounds and relevant insights on solutions and best practices from related scientific literature. Secondly, we will provide an overview of the objectives, methodology, and phases of the research, introducing the experimental protocol applied to the case scenarios illustrated in chapter six.

2. Research background: museum accessibility

Within the wider frame of leisure, it is possible to locate the topic of cultural life participation, which encompasses the right to choose, access, engage with and feel welcome in cultural life and cultural contexts (such as museums, galleries, theatres, libraries, heritage sites) (Hallmann et al., 2017; Bantekas et al., 2018). Experiences and contexts connected to the fruition of cultural heritage, in this direction, can offer relevant educational opportunities, while representing a central space to promote a sense of community belonging, personal development and social inclusion, as shown by related studies (Giaconi et al., 2021; Shogren et al., 2022; Del Bianco et al., 2024; Giaconi et al., 2024a) and in line with our previous considerations regarding the pedagogical impact of leisure. To this end, the following subparagraphs will help us further define the context of the research: firstly, we will illustrate the conceptual lines related to the renewed role of museums in contemporary societies, highlighting how such a role puts forth the need for accessibility-driven solutions, as well as related principles and policies. Secondly, we will illustrate the concept of accessibility from a pedagogical perspective, highlighting the frameworks of Universal Design (UD) and Universal Design for Learning (UDL) as operational trajectories that can support the creation of inclusive cultural environments. Lastly, we will present a synthetic reconnaissance of the

main solutions implemented to support physical and cultural accessibility within museum environments, with a specific focus on the role of innovative technologies, highlighting current opportunities and challenges, further contextualising our context of action.

2.1 The museum as a space for social care: foundational principles and policies

The rationale for considering cultural heritage fruition as a means to protect identity, social belonging, and citizenship for all people—including those with disabilities—can be found in several foundational international documents, which articulate participation to cultural life as a fundamental human right and a collective responsibility (Giacconi et al., 2024a). Article 27 of the *Universal Declaration of Human Rights* (1948) (mentioned in chapter one) represents a clear example of how, within leisure, cultural participation, rather than a privilege, is considered to be a fundamental human right, affirming how its benefits should be shared by all without being object of discrimination dynamics. In this direction, UNESCO has been particularly active in expressing how cultural fruition contexts, as sites of leisure, represent a collective resource that is relevant to social inclusion, explicitly requiring Member States to adopt every necessary means—including legislative, administrative, and educational—to create and maintain an inclusive system for cultural participation. In its *Recommendation concerning the Most Effective Means of Rendering Museums Accessible to Everyone* (1960), UNESCO underlines the importance of addressing accessibility and inclusion in light of contemporary social, technological, economic, and demographic changes. To this end, the Recommendation states how museums can:

“give fresh impulse to popular education and to the spread of culture, to collaborate in the work of advancing the mutual understanding of peoples by instituting collaboration among them to advance the ideal of equality of educational opportunity without regard to race, sex or any distinctions, economic or social, and to maintain, increase and diffuse knowledge” (p.1).

More recently, UNESCO’s *Recommendation concerning the protection and promotion of museums and collections, their diversity and their role in society* (2015) reiterates the importance of addressing accessibility and inclusion in light of contemporary social, technological, economic, and demographic changes. To this end, the Recommendation emphasises how museums contribute not only to heritage and scientific research, but also to enjoyment, creativity, wellbeing, and social cohesion, stating that:

“Museums are vital public spaces that should address all of society and can therefore play an important role in the development of social ties and cohesion, building citizenship, and reflecting on collective identities. Museums should be places that are open to all and committed to physical and cultural access to all, including disadvantaged groups. They can constitute spaces for reflection and debate on historical, social, cultural and scientific issues. Museums should also foster respect for human rights and gender equality. Member States should encourage museums to fulfil all of these roles” (p. 5).

In this context, UN’s *2030 Agenda for Sustainable Development* (2015) further anchors culture at the crossroads of inclusion and community wellbeing. Indeed, the UN 2030 Agenda frames participation in cultural life within a global development paradigm, highlighting a cross-cutting role that aligns with the goals of *Quality Education* (Goal #4), *Industry, Innovation and Infrastructure* (Goal #9), *Reduced Inequalities* (Goal #10), *Sustainable Cities and Communities* (Goal #11), and *Partnership for the Goals* (Goal #17). These documents not only put forward accessibility and inclusion within cultural life as a foundational principle for

equitable and democratic societies, but also demand researchers, institutions and professionals to find concrete and practical solutions to ensure participation of all people, placing these concepts at the hearts of cultural policies and practices.

2.1.1 Museum accessibility policies in the Italian context

In accordance with the recognition of accessibility and inclusion as vital aspects of museums, several normative frameworks aim at guiding the implementation of inclusive solutions within museum contexts, as such a trajectory acquired a growing centrality in national and international policy makers' agenda (Seale et al., 2021; Leahy & Ferri, 2022). On a global level, the International Council of Museums represents a leading institution in the provision of guidance to promote cultural heritage accessibility (Lewis, 2016; Garlandini, 2018), providing relevant standards for museum work. Further in this direction, EU's *Recommendation of the Committee of Ministers to member States on the European Cultural Heritage Strategy for the 21st century* (Council of Europe, 2017) highlights multiple implementation strategies for policy makers and museum professionals, with the aim of accommodating the public's diverse needs by providing multiple means of interaction and engagement with cultural heritage.

With reference to the national context, the Italian legislative framework for museum accessibility has evolved significantly over the past 20 years, reflecting a growing commitment to inclusivity and the recognition of cultural participation as a fundamental right. The Code of Cultural Heritage and Landscape (*Codice dei Beni Culturali e del Paesaggio*) (Legislative Decree 42/2004) represents one of the first policy documents that are relevant to our topics, laying the groundwork for cultural heritage protection and promotion. Specifically, Article 6 emphasises how cultural heritage enhancement is directly connected to the promotion of cultural heritage

knowledge, underlining the need to ensure a widespread fruition of museums as spaces for learning for all people, including those with disabilities. The Legislative Decree explicitly refers to the creation of paths and supports that should take into account the needs of visitors with disabilities. In 2008, the Guidelines for the Removal of Architectural Barriers in Places of Cultural Interest (*Linee guida per il superamento delle barriere architettoniche nei luoghi di interesse culturale*) (Ministerial Decree of 28 March 2008) advances the trajectories of museum accessibility by integrating the concept of accessibility (defined as physical and sensory) with the concepts of adaptability (i.e., the ability of a context to be adjusted and modified to respond to diverse needs without compromising its cultural content) and visitability (i.e., visitors' possibility to access and interact with the cultural content). A pivotal moment came in 2009 with Italy's ratification of the *UN Convention on the Rights of Persons with Disabilities* (Law 18/2009), which reinforces Italy's commitment towards integrating accessibility principles and practices within cultural institutions to support people with disabilities. Advancing further, the guidelines related to the Plan for the Elimination of Architectural Barriers (*Piano di Eliminazione delle Barriere Architettoniche - PEBA*⁷) introduce several developments. Firstly, the Plan advocates for an integrated approach to museum accessibility, envisioning interventions to remove barriers as part of wider actions in the territory, dedicated to creating more inclusive cities and communities. Secondly, the plan addresses technological transformation by promoting the use of innovative tools to enhance inclusive design within cultural contexts. The Plan also promotes participatory design approaches, calling for the need to involve a wide range of stakeholders (cultural experts, associations, communities) in the design of solutions that can accommodate the needs of diverse people, focusing not only on adaptation, but also on the prevention of barriers through accessibility-by-design

⁷ www.musei.beniculturali.it

approaches. Lastly, the Ministerial Decree 113/2018 establishes uniform quality standards for museums and public cultural institutions, introducing specific criteria for accessibility and reception services. Consequently, the Decree aims at ensuring that museums can meet minimum quality levels and be accountable for continuous improvement. Collectively, these legislative measures reflect Italy's commitment to fostering an inclusive cultural environment, ensuring that museums can be welcoming spaces for all people.

2.1.2 The concept of new museology: opportunities and challenges

The centrality of museums as resourceful leisure contexts for individuals and communities' Quality of Life—recognised by international frameworks and regulations—reflects a significant turning point in the field of cultural heritage fruition, linked to the social, cultural and technological transformations that invested contemporary societies (Borowiecki & Navarrete 2016; Llamazares De Prado & Gago 2020). Such a critical resignification point is referred to as “new museology” (Ross, 2004, p. 84), and is aimed at embracing visitors' needs and diversity to increase accessibility and engagement (Vergo 1989; Macdonald & Fyfe 1996; McCall & Gray, 2014; Chong et al., 2021; Morse, 2021). As noted by related scientific literature, this turning point stemmed from questioning the traditional meanings and roles of the museum, thereby reasserting its social and cultural value within communities, with a particular attention towards topics related to accessibility and inclusion (Bakhshi & Throsby, 2011; Nielsen 2014; Rizzo 2016). While traditional museology is based on conceptualising the museum as a space for conservation of artefacts, new museology emphasises principles and practices that can harness its potential for individual and collective wellbeing, aimed at increasing full participation and meaningful experiences for all citizens, defining the museum

as a space for social care (Ross, 2004; McCall & Gray, 2014; Morse, 2021). In this sense, the new museology developed as a response to collection-centred visions, seeking to redefine museums' relationships with audiences and communities by finding alternative methods of interaction with cultural heritage and encouraging visitors to take on participatory roles in curatorial decision-making (Giaconi et al., 2021; Del Bianco et al., 2024; Giaconi et al., 2024a). Such a paradigm shifted cultural institutions' focus from objects to ideas, assuming a visitor-centred perspective and reflecting upon topics such as cultural empowerment and social responsibility (Star, 2016; Morse, 2021).

Although new museology provided an influential framework for rethinking museum practices and has been thoroughly explored from a theoretical point of view, the extent to which it has concretely transformed cultural institutions, generating real impact, remains contested by scientific studies (Papadimitriou, 2016; Creed et al., 2024a, 2024b; Giaconi et al., 2024a). In this direction, the provision of national and international frameworks and guidelines might not sufficiently address the social, economic and technological variety of museums' concrete spaces of action (Creed et al., 2024a, 2024b; Giaconi et al., 2021; Giaconi et al., 2024a). As a result, the mandate for heritage management to increase accessibility and inclusivity is far from being achieved globally: while some institutions have redesigned their contexts, staffing, and governance, these efforts often appear fragmented and occasional, lacking a systemic vision and concrete strategies for implementation (Leahy & Ferri, 2022; Giaconi & Del Bianco, 2025). Such a scenario leaves museums to determine their own paths for translating theory into practice: with specific reference to the Italian context, recent reports indicate how the promotion of inclusion within cultural environments is far from being fully achieved throughout the territory (ISTAT, 2022) (Figure 1).

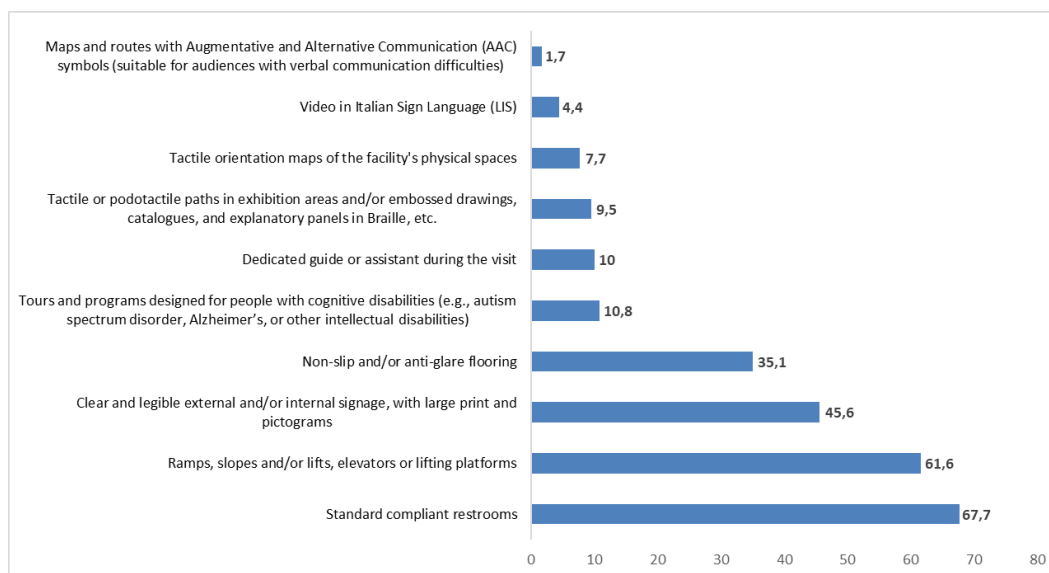


Figure 1 – Museums equipped with supports and services to facilitate access and fruition for people with disabilities (Values in percentage) (www.istat.it)

In general, the concept of new museology aligns with our reflections regarding the pedagogical value of leisure and—specifically—cultural life participation, representing a significant step towards the creation of inclusive cultural environments (Star, 2016). However, as outlined, it also poses significant challenges to be considered, which are linked to the urgent need of identifying shared strategies and solutions that can ensure the quality, authenticity and accessibility of cultural fruition experiences for all people, including those with disabilities, by developing systemic actions (Giacconi et al, 2024; Giacconi & Del Bianco, 2025). Such actions therefore require to unfold the concept of accessibility from a multifaceted perspective, supporting the establishment of shared visions and meanings from a theoretical and operational point of view, as we will present in the following section.

2.2 A pedagogical reading of accessibility: from theory to practice

As highlighted in the previous paragraph, accessibility represents one of the most challenging and urgent dimensions to address in order to fulfill the social and cultural mandate of museums as spaces for individual and collective wellbeing, in line with a pedagogical perspective on the value of leisure contexts for Quality of Life, representing a resourceful yet complex trajectory for policy makers, cultural institutions, and researchers (Giaconi, 2015; Giaconi & Del Bianco, 2025). In order to understand how the gap between theoretical guidance and practical application can be bridged, it appears necessary to deepen the pedagogical meaning of accessibility itself, highlighting its practical implications for the creation of inclusive leisure contexts (Giaconi et al., 2023; Giaconi & Del Bianco, 2025).

The concept of accessibility, in the strict sense, can be defined as the degree of easiness with which a person can access a product, service, or context (Brewer, 2001). In this direction, from a technical standpoint, accessibility involves the design and implementation of systems, interfaces and infrastructures that can meet diverse needs, and can be measured through objective criteria, such as performance metrics, compliance levels, and interoperability parameters (Brewer, 2001; Persson et al., 2015; Ceccacci et al., 2023). In alignment with this interpretation, Human Interaction studies introduce the concept of usability as the possibility for end-users to achieve the best possible outcomes from a given resource in terms of effectiveness and gratification (Keenan et al., 2022; Ceccacci et al., 2023). For the purpose of our work, which assumes a pedagogical perspective, accessibility and usability can be considered as two overlapping concepts, as they both refer to the possibility of increasing equal participation opportunities.

While accessibility can be described in technical terms as the set of measures and standards that ensure the usability of products, services, and environments (Brewer, 2001), it also assumes a broader social significance when seen from a rights perspective. Indeed, in addition to its technical definition, accessibility can

be defined as a fundamental human right, as affirmed by Article 9 of the UN *Convention on the Rights of Persons with Disabilities* (2006), stating that:

“To enable persons with disabilities to live independently and participate fully in all aspects of life, States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas. These measures, which shall include the identification and elimination of obstacles and barriers to accessibility, shall apply to, inter alia:

- a) Buildings, roads, transportation and other indoor and outdoor facilities, including schools, housing, medical facilities and workplaces;
- b) Information, communications and other services, including electronic services and emergency services” (p, 9)

Following this definition, accessibility can embody the principles of equity and social justice by offering a human rights framework, representing a dimension through which all people can participate fully in society (Giaconi et al., 2024a). The UN’s perspective on accessibility as a fundamental human right introduces a central conceptual distinction related to this concept, which is embodied in letters a) and b) of the first subsection of Article 9. Specifically, the Convention introduces the difference between physical accessibility (letter a)) and cultural accessibility (letter b)) (Giaconi et al., 2021; Giaconi et al., 2024a; Giaconi & Del Bianco, 2025). On the one hand, physical accessibility refers to the freedom of entering, exiting, circulating within and navigating physical spaces, services and facilities, addressing movement, the presence of obstacles and the location of physical elements within a space: physical accessibility addresses elements such as stairs and ramps, the width of entrances, the height of light switches, and so on (Smithsonian Institution, 2010; Marín-Nicolás & Sáez-Pérez, 2022). On the other hand, cultural accessibility is related to information, knowledge and culture, addressing how such are conveyed

and expressed in terms of sensory channels, communication formats and interaction opportunities: cultural accessibility addresses aspects such as the use of language and symbols, signage, information material, and so on (Giaconi et al., 2021; Shogren et al., 2022; Giaconi et al., 2024a). In this direction, the UN Convention helps us understand how accessibility is not only a question of physical barriers, but also addresses how knowledge and culture are coded and shared among communities, offering a significant layer of reflection upon museum contexts' level of accessibility and inclusion (Giaconi & Del Bianco, 2025).

As recalled by Special Pedagogy studies (Caldarelli, 2023; Del Bianco et al., 2024), such a conceptualisation of accessibility aligns with a bio-psycho-social approach to disability, which is well expressed in the *International Classification of Functioning Disability, and Health* (ICF) (WHO, 2001, 2007; UN, 2006). Such an approach, in fact, acknowledges how the provision of concrete opportunities for social inclusion are directly related to the environmental factors that characterise each context, highlighting the role of environmental factors (namely, facilitators and barriers) in impacting the person's experience and level of engagement (WHO, 2001, 2007). In this direction, the recognition of accessibility as a fundamental trajectory to ensure the full participation of all people across life environments highlights the need to remove physical and cultural barriers within all life contexts, including those related to cultural heritage fruition (Giaconi et al., 2023; Giaconi et al., 2024a). Building upon these considerations, the need to identify theoretical and operational models able to protect the right to accessibility emerges, valuing it as an essential condition to promote the active participation and social inclusion of all people. In this direction, the design of accessible contexts represents an important lever to increase the Quality of Life of people with disabilities, as opportunities for inclusion derive from “the educational and social action—concretely situated—through which the personal growth and development potential meets the conditions

that allow its expressions and realisation in subjectively significant forms” (Ghirotto, 2018, p. 238). As design represents a practice that allows acting on the conditions that characterise life contexts (Norman, 2013), the framework of Universal Design (UD) emerges as a specific resource to transform environments, increasing their level of accessibility and inclusivity, following the implications of the bio-psycho-social approach to disability.

The expression “Universal Design” (or “Design for All”) was introduced in the North Carolina State University within the field of architecture by the American architect Ronald Mace, to then acquire its multidisciplinary meaning, in relation to all life environments (Mace, 1985). In this sense, Universal Design represents an approach that aims at maximising the accessibility and usability of spaces, products and services throughout solutions that can adapt and respond to the specific needs of as many people as possible, still acknowledging how some people will need specific supports to access them (Maisel & Steinfeld, 2012). To further highlight the operational implications of this approach, we present below the key principles that were highlighted by the Center for Universal Design of North Carolina State University, articulating its theoretical foundations to ensure applicability across life environments (Connell et al., 1999):

- *Equitable Use*: the design should offer equal participation and interaction opportunities with reference to individual differences (such as age or gender);
- *Flexibility in Use*: the design should adapt to individual preferences, skills and approaches, presenting a good degree of flexibility in terms of interaction modalities;
- *Simple and Intuitive Use*: the design should be simple in its use and easy to understand, providing clear affordances to people approaching it:

- *Perceptible Information*: the design should offer all the necessary information to support the person in its use, ensuring it is clear and perceptible;
- *Tolerance for Error*: the design should minimise the risk of incidents or negative consequences related to unintentional actions during interaction;
- *Low Physical Effort*: the design should provide a comfortable, effective and efficient experience, without resulting burdensome;
- *Size and Space for Approach and Use*: the design should offer the appropriate context for the interaction in terms of size and space.

As our context of reference—the museum—has been framed in this work as a central leisure environment for learning and social engagement, the operational trajectories of Universal Design can be further contextualised in museum contexts through the consideration of Universal Design for Learning (UDL), which represents the specific body of UD principles and practices developed for specific application in educational contexts (Rose & Meyer, 2002; Izzo, 2012; Rose et al., 2014; Savia, 2016; Aiello & Giaconi, 2024). According to related literature (Savia, 2016; Bochicchio & Pennazio, 2024), UDL represents a foundational paradigm for understanding and structuring learning processes within the ecosystems in which they occur, emphasising the connection between design practices, learning processes, and active participation in fostering inclusive educational contexts (Rose & Meyer, 2002; Izzo, 2012; Savia, 2016). Specifically, UDL is based on providing multiple means for three main purposes (CAST, 2024):

- *Engagement* (the *why* of learning): it expresses the importance of recruiting interest, sustaining effort and persistence, and self-regulation;
- *Representation* (the *what* of learning): it puts forth questions related to perception, language and symbols, and comprehension;

- *Action & Expression* (the *how* of learning): it is related to physical action, expression and communication, and executive function.

In this direction, Universal Design for Learning is not only based on transforming physical contexts related to educational processes, but is also aimed at reformulating contents, strategies and relationships by offering plural opportunities to engage with cultural contents by addressing tangible and intangible elements (Cottini, 2019), as the design focus is directed towards the provision of flexible solutions able to respond to the complex interaction that is created between the person and the museum context (WHO, 2001; Giaconi et al., 2021; Giaconi et al., 2024a).

The frameworks of UD and UDL both envision the principle of reasonable accommodation (Fantozzi, 2022), which is defined as the “necessary and appropriate modification and adjustments not imposing a disproportionate or undue burden, where needed in a particular case, to ensure to persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms” (UN, 2006, p.4). This principle is therefore aimed at orienting sustainable trajectories in the design of inclusive environments, while maintaining a rights-oriented perspective (Fantozzi, 2022). Additionally, both frameworks aim at orienting inclusive design principles and practices with reference to five specific dimensions⁸:

- *Built Environment*: it encompasses all the physical aspects of a context (e.g., buildings and infrastructures);
- *Information Environment*: it encompasses the way information and knowledge are shared (e.g., sensory channels and information supports);

⁸ www.humancentereddesign.org

- *Communication Environment*: it encompasses the way people can communicate and interact (e.g., codes and symbols);
- *Policy Environment*: it encompasses policies, laws and regulatory frameworks that support accessibility and inclusion (e.g., social provisions and services);
- *Attitudinal Environment*: it encompasses the attitudes, values and beliefs of communities towards disability and inclusion.

In conclusion, with reference to our research background, both UD and UDL serve as theoretical and operational frameworks that can orient the design of products, services and contexts with an inclusive approach, acknowledging the need to support meaningful experiences in cultural heritage fruition and museum contexts. In light of these reflections, the operationalisation of the concept of accessibility in museum contexts, rather than following a mere logic of adaptation and modification, emerges as a design stance and a central interpretative perspective, grounded in an accessibility-by-design approach (WHO, 2001; Goldsmith, 2007; Aiello & Giaconi, 2024; Giaconi et al., 2024a) aimed at ensuring authentic, meaningful, and inclusive cultural experiences. Within the context of new museology and the conceptual frameworks of Special Pedagogy, the following paragraph will provide a synthetic reconnaissance of the main accessibility solutions that have been implemented in museum environments to support physical and cultural accessibility.

2.3 Accessible cultural experiences: solutions and best practices

As previously highlighted, the adoption of a pedagogical perspective in the definition of accessibility allows us to shift the focus from a mere logic of adaptation to an enriched, systemic approach, which is focused on the transformation of museum environments as a crucial trajectory to increase opportunities for active participation, social inclusion and Quality of Life of all people, including those with disabilities (Giaconi, 2015; Aiello & Giaconi, 2024; Giaconi & Del Bianco, 2025).

In this direction, through a reconnaissance of existing guidelines, scientific studies and museum best practices, several strategies and solutions aimed at increasing museum accessibility for people with disabilities can be highlighted, as illustrated in the following sections.

2.3.1 Physical spaces

A first dimension which is relevant to museum accessibility, as anticipated, is related to the physical accessibility of museum contexts, which addresses the physical organisation of the spaces designated for cultural heritage fruition (Braden, 2016; Pressman & Schulz, 2021). In this sense, to guarantee a good level of accessibility, existing literature stresses the importance of ensuring that entrances, exits, passages and relevant areas are ample enough to welcome the transit of all people, including those who use mobility aids such as wheelchairs (Smithsonian Institution, 2010; Pressman & Schulz, 2021). These aspects should also be considered taking into account the number of people who are expected to be navigating the museum's designated spaces (Smithsonian Institution, 2010). According to existing recommendations and guidelines, it is also important to pay attention to the removal of obstacles to mobility in order to ensure unobstructed pathways, provide proper solutions for overcoming changes in level (such as

ramps), and guarantee the presence of ischial supports and rest areas distributed evenly along the entire exhibition route (Smithsonian Institution, 2010; Braden, 2016). To ensure safe mobility, transit surfaces should be as homogeneous as possible and made of non-slip, high-adhesion materials (Pressman & Schulz, 2021). Finally, it is important to emphasise that physical accessibility must also extend to all public and complementary services that support and enhance the visiting experience—such as ticket offices, restrooms, parking areas, and building access points—as these components constitute essential elements of the overall accessibility of the space, equally significant as the exhibition itself (Smithsonian Institution, 2010; Braden, 2016; Pressman & Schulz, 2021).

2.3.2 Information and storytelling

With reference to the cultural accessibility of museum contexts, scientific literature highlights the need to adopt multiple and alternative means of representation and interaction with the cultural content, in order to ensure that all people can perceive, engage with, and understand both the information related to the museum path and the knowledge and culture it seeks to share with its visitors (Eardley et al., 2016; Pressman & Schulz, 2021; Giaconi et al., 2021; González-Herrera et al., 2023; Del Bianco et al., 2024; Giaconi et al., 2024a).

In relation to the development of accessible storytelling, many solutions have been implemented across museums, offering a multitude of viable trajectories (Pressman & Schulz, 2021; Giaconi et al., 2024a). For visitors with visual disabilities especially, studies highlight the possibility of designing and implementing Audio Description (AD) content to support the museum experience, providing a verbal narration of the information and artefacts displayed along the route (Smithsonian Institution, 2010; Fiorucci & Pinnelli, 2013; Eardley et al.,

2017; Hutchinson & Eardley, 2020). According to scientific literature, AD materials can convey a wide range of information about the exhibited content, including the exhibition context, dimensions of the artefact, techniques and materials used, depicted subjects and elements, sensory and emotional qualities, and historical information regarding its creation (Pacinotti, 2019; Perego, 2019; Hutchinson & Eardley, 2020; Taylor & Perego, 2020). In parallel with audio narratives, it is possible to provide tactile didactic materials and supports for interacting with informational and cultural content. In this regard, existing guidelines and studies promote the integration of Braille captions and tactile reproductions of artefacts (either fully three-dimensional or in relief), as well as other supports (such as tactile cards that combine Braille information with scaled reproductions) (Smithsonian Institution, 2010; Graven et al., 2020). According to scientific literature, these supports can be created through virtual prototyping and 3D printing, or, in the absence of such resources, with the assistance of specialised external providers, improving access to museum collections (Smithsonian Institution, 2010; Vaz et al., 2020). For visitors with hearing disabilities, the visit experience can be supported by the introduction of sign language storytelling, which can be offered live by specialised personnel or can be prerecorded and offered through technological supports (e.g., mobile devices or digital panels) (Smithsonian Institution, 2010; Neves, 2018; Partarakis et al., 2021; Adams, 2025). To this end, scientific literature highlights the need to ensure the visibility of gestures and movements through a suitable positioning and illumination (Adams, 2025). Closed Captions (CC) storytelling is also recommended in presence of audiovisual contents, ensuring that audio information can be delivered through synchronous textual narrations (Smithsonian Institution, 2010; Watlington, 2019). According to scientific literature, with reference to visitors with intellectual

disabilities, the Easy-to-Read guidelines⁹ represent a central resource to ensure accessible communication formats (which can also be applied to audio description resources) (Shogren et al., 2022; Giaconi et al., 2024a; Olmedo-Pagés, 2024). The guidelines offer indications regarding the stylistic choices that should guide the creation of museum captions and informational texts, among which we can cite:

- Creating short and simple-structured sentences, avoiding complex and long lines;
- Using the same word to refer to the same objects throughout the text;
- Avoiding metaphors and other expressions that are not linked to concrete experience;
- Utilising simple tenses (such as the present simple);
- Utilising verbs in their active form;
- Repeating key information and concepts throughout the text;
- Optimising and validating the content drafted according to the guidelines by actively involving people with intellectual disabilities and asking for their feedback through a co-design approach.

Another useful solution is represented by the use of Augmentative and Alternative Communication (AAC), integrating standardised or personalised picrograms to support the understanding of captions and informational texts (Napolitano et al., 2024).

An additional aspect to be addressed with reference to museums' cultural accessibility is related to the provision of effective informational materials in print or digital formats to complement the visiting experience, which should be designed according to existing standards (Smithsonian Institution, 2010; Pressman & Schulz, 2021). For printed materials, it is essential to ensure adequate font size and

⁹ www.inclusion europe.eu

sufficient color contrast between text, graphic elements, images, and backgrounds (Alexander, 2024). For online resources, users should be able to customise webpage navigation through font adjustments, color contrast settings, and other integrated accessibility features, in accordance with the Web Content Accessibility Guidelines (WCAG) 2.2¹⁰. In both cases, the adoption of highly legible fonts and Easy-to-Read formats is recommended by multiple studies, as well as the reduction of the perceptual load in the print or digital supports, promoting intuitiveness, modularity and simplicity in the visual organisation of content (Cornish et al., 2015; Del Bianco et al., 2024; Giaconi et al., 2024a).

Regarding the provision of spatial information support, aimed at ensuring autonomy and wayfinding during the visit, existing guidelines underline the importance of ensuring adequate visual contrast and lighting within museum spaces (Smithsonian Institution, 2010; Pressman & Schulz, 2021). To this end, existing guidelines recommend to use homogeneous walls and backgrounds, maintain color contrast between flooring, walls, and exhibition content, and clearly highlight the presence of steps or other potential obstacles (Smithsonian Institution, 2010). Clear signage based on the combination of text and symbols can direct visitors while navigating the exhibit spaces (Smithsonian Institution, 2010; Pressman & Schulz, 2021; Giaconi et al., 2024a). Additionally, printed and tactile orientation maps, based on the floor plan and providing key information about the visiting routes (e.g., entrances, exits, path orientation, points of interest), can represent a useful support to all visitors when installed at the entrances of the exhibition space or provided to visitors (Landau, 2010). Lastly, to support a safe and autonomous visiting experience, studies also experimented with the integration of tactile horizontal pathways in the museum space, which consist in the installation of a tactile floor signage system to provide directional information (Del Bianco et al., 2024). The

¹⁰ www.w3.org

signage system consists in the placement of raised tiles, each of which corresponds to specific information (e.g., straight direction, attention/point of interest, 90° turn, T-shaped intersection, and so on) and the installation of tactile strips for marking stairs and handrails (Del Bianco et al., 2024).

With reference to the sensory impact of museum environments, it is recommended to monitor lighting regulation and color contrast in the display of artefacts. In this respect, artefacts should be positioned in clearly visible locations, avoiding shadows or reflections caused by transparent display cases, and should maintain a sufficient chromatic contrast with the background on which they are placed (Smithsonian Institution, 2010; Del Bianco et al., 2024). Additionally, noisy environments or areas characterised with reverberation can be made more accessible through the use of sound-absorbing material aimed at reducing background noise, also ensuring that amplification or sound transmission systems are compatible with hearing devices (Smithsonian Institution, 2010).

Another important resource is represented by the provision of pre-visit materials, both digital or printed, which can offer visitors a means through which they can plan in advance for the museum experience (Giaconi et al., 2021). In this direction, the use of social stories can support visit planning by helping people prepare for situations that fall outside their usual routine. Through clear descriptions of the environments and scenarios they will encounter, social stories allow them to familiarise themselves with the context, rules, and expected behaviours (Giaconi et al., 2021; Schwartzman & Knowles, 2022). Additionally, the provision of sensory maps can support visitors in anticipating and preparing for the visit by highlighting sensory-friendly zones and those that may cause sensory overload, indicating noise levels, smells, lighting, temperature, and crowding of the exhibition areas by using an explanatory legend (Cieslik, 2024).

2.3.3 Technological supports

Among the solutions that are being implemented across museums to increase the accessibility of cultural heritage, new technologies emerge as potential facilitators for the visit experience, offering new formats for the accessibility of information, contents and environments in light of their innovative and transformative potential (Carci et al., 2019; Giaconi et al., 2021; Giaconi et al., 2024a). The application of the most recent technologies can represent a viable trajectory to overcome barriers in accessing cultural spaces and contents, promoting the creation of inclusive museum environments that can welcome all visitors (Luigini & Panciroli, 2018; Llamazares De Prado & Arias Gago 2020; Giaconi et al., 2021; Caldarelli et al., 2023; Giaconi et al., 2024a). In fact, the use of innovative technologies offers novel means through which the museum experience can be delivered, increasing the opportunities for representation, interaction, and engagement offered by traditional supports and potentially expanding the reach and meaningfulness of cultural heritage fruition (Luigini & Panciroli, 2018; Carci et al., 2019; Caldarelli et al., 2023; Ceccacci et al., 2023; Del Bianco et al., 2024; Giaconi et al., 2024a; Giaconi & Del Bianco, 2025). In this direction, studies in Special Pedagogy have long highlighted the inclusive potential of technologies in educational and museum contexts when designed and integrated with a pedagogical intention (Giaconi et al., 2021; Del Bianco et al., 2024; Giaconi et al., 2024a). In alignment with these considerations, the approach of new museology frames innovative technologies as potential tools to enhance cultural heritage fruition for all visitors (Ross, 2004; McCall & Gray, 2014; Morse, 2021), creating cultural contents and environments that can embrace diversity (Giaconi et al., 2021; Shogren et al., 2022; Chiatti et al., 2023; Paladini et al., 2023; Giaconi et al., 2024a).

Among these supports, eXtended Reality (XR) technologies, which encompass Augmented Reality (AR), Virtual Reality (VR), and Mixed Reality (MR), have introduced novel possibilities for the fruition of cultural heritage, producing a growing impact in the field of learning and museum innovation, thanks to their increasing availability and diffusion (Leopardi et al., 2021; Lester & Hoffman, 2020; Aguayo & Eames, 2023). Specifically, scientific literature shows how XR technologies can enrich the museum experience by integrating physical reality with computer-generated content, offering a wide range of supports to interact with cultural contents in various degrees of interactivity, immersivity and operability (Quintero et al., 2019; Dhaas, 2024). In particular, AR technologies allow the design of composite environments, in which digital information (such as visual or auditory cues) enriches the physical space in a multisensory approach that encompasses adaptability and personalisation functions (Wellner et al., 1993; Craig, 2013). Such technologies consist in the combination of multiple sensory channels to experience cultural heritage, responding to diverse visitors' needs without generating overly-loaded perceptual stimuli (Boboc et al., 2022). VR technologies, alternatively, offers a higher level of immersivity and engagement in the experience of cultural contents and artefacts, simulating the museum environment in a computer-generated space and requiring the use of proper hardware (such as VR headsets) (Giaconi et al., 2021; Zhong et al., 2021). In general, XR technologies offer the possibility to interact with cultural heritage even when the original contents and artefacts cannot be experienced directly (e.g., for conservation purposes or for other barriers to access) (tom Dieck et al., 2019; Leopardi et al., 2021). This feature can also be leveraged to create models that anticipate the visit experience, allowing people to explore the exhibit spaces and contents in advance by collecting spherical pictures and creating three-dimensional environments that can be navigated virtually (Lee et al., 2020). To this end, as

highlighted in previous research (Giaconi et al., 2021), XR technologies can offer supports that go beyond the perception and understanding of information, providing means to navigate and interact with the museum environment through forward models (Barale et al., 2009), responding to the possible need for anticipation in space exploration of people with intellectual disabilities. Overall, existing studies highlight how XR technologies can provide integrated environments that combine multiple communication formats and accessibility solutions, supporting the development of immersive and innovative environments for multimodal interaction with museums (Giaconi et al., 2021; Giaconi et al., 2024a).

The creation of accessible communication formats can also be supported by the use of semi-automatic systems based on Artificial Intelligence (AI) systems, such as Large Language Models (LLMs) (Pisoni et al., 2021; Giaconi et al., 2024a). As shown by related literature, the tools can process information of various kinds (textual, visual, auditory) according to models that can be trained ad hoc. Such a possibility can allow semi-automatic or automatic processes to create, for instance, Easy-to-Read resources (Giaconi et al., 2024a).

Finally, with reference to engagement, as studies recognise the importance of providing different options, paths and activities that can leverage each visitors' interest and active participation (Ceccacci et al., 2021; Shogren et al., 2022; Del Bianco et al., 2022; Giaconi et al., 2024a), innovative technologies can be leveraged to accommodate personalisation needs (Giaconi et al., 2024a; Rossi et al., 2024). To this end, XR and IA technologies can be integrated in museum paths throughout the design and development of technological devices for accessibility and multimodal interaction. Such devices can provide an inclusive and informative experience for all visitors, including those with disabilities, as they allow the systemic integration of multiple contents and formats to experience cultural heritage, allowing personalisation and flexibility (Giaconi et al., 2021; Giaconi et

al., 2024a). In this direction, scientific literature has also explored the use of haptic devices to interact with virtual artefacts within museum paths (Comes, 2016; Ceccacci et al., 2021; Del Bianco et al., 2024). Specifically, haptic technology allows the simulation of tactile sensations within virtual environments, providing users with information regarding the shape, surface, texture and density of the digital object they include (Butler & Neave, 2008). In this direction, the use of haptic technology allows one to experience digitally reconstructed artefacts even when, for conservation and safety purposes, it is not possible to directly interact with them, providing a realistic and authentic experience (Ceccacci et al., 2021). Additionally, the use of Virtual Museum (VM) applications in mobile or desktop interfaces (such as smartphones, tablets, and computers) emerged as a viable trajectory to support museum experiences through the provision of interactive, flexible and personalised supports (Petridis et al., 2013; Giaconi et al., 2024a). Such applications can allow visitors to organise their visit and choose their preferred path, access didactic materials and information on exhibits, as well as interact with cultural artefacts through interactive contents (Giaconi et al., 2024a).

In general, the use of new technologies, such as XR technologies, AI systems, haptic devices and VM apps can offer innovative means to design accessible museum experiences (Luigini & Panciroli, 2021; Giaconi et al., 2021; Giaconi et al., 2023; Giaconi et al., 2024a).

In parallel to the promising horizons offered by innovative technologies for the design of accessible museum experiences, scientific literature highlights critical questions that are still open to this day, and which are directly connected to the implementation challenges related to new museology and inclusive interventions for cultural life participation (Dudley et al., 2023; Creed et al., 2024a, 2024b). In the first place, studies highlight how technology-based solutions for museum accessibility are still the product of unstructured, experimental interventions, rather

than being rooted in systemic protocols and procedures (Dudley et al., 2023; Creed et al., 2024a, 2024b). In this sense, museums are currently navigating technological innovation without fixed frameworks that are oriented from a pedagogical point of view, evidencing how the knowledge they build on practical solutions and strategies for museum accessibility appear to be fragmented and not systematised according to standardised and generalisable operational approaches, which limit the replicability of their experience (Sheehy et al., 2019; Lasica et al., 2020; Howard & Davis, 2023; Creed et al., 2024a; 2024b). Another focal point is represented by the evident lack of co-design approaches and participatory practices in the design of accessible paths, which significantly limits the potential impact of technological innovation in the response to needs, preferences and lived experiences of people with disabilities (Creed et al., 2024a; 2024b). Such a systematic absence of community involvement can result in interventions that, although technically compliant, are insensitive to the experiential, social, and cultural dimensions of accessibility, reducing this concept to a mere question of normative and architectural adjustments, rather than a shared and iterative process (Titchkosky, 2011). Lastly, as noted with reference to the general dimension of leisure in the previous chapters, numerous studies highlight the significant lack of competences possessed by museum personnel with reference to both inclusive principles & practices and the use of new technologies: such an aspect underlines the importance of acquiring the appropriate knowledge and competencies to implement traditional and innovative tools through a pedagogically sound approach, oriented towards the principles of inclusion and UD/UDL (Sheehy et al., 2019; Marín-Díaz et al., 2022; Freese et al., 2023; Creed et al., 2024a; 2024b; Nikou et al., 2024).

As a result, in alignment with the evidence offered by scientific literature, the main challenges related to the creation of accessible museum paths based on the principles of inclusion and accessibility, also leveraging innovative technologies,

are linked to the lack of know-how that is necessary to implement tangible and intangible resources aimed at increasing full participation opportunities for visitors with and without disabilities. To this end, there is an urgent need to develop comprehensive, pedagogically oriented application frameworks, which should translate the pedagogical knowledge on leisure into protocols that can address the complexities related to designing truly inclusive cultural environments, including museum contexts. As a result, the importance of involving people with disabilities in the development of accessibility solutions is again reinforced, alongside promoting inclusive professional training, raising the need to conduct participatory empirical research to develop a deeper understanding of these topics (Shogren et al., 2022; Giaconi et al., 2024a).

It is in response to these challenges that we can situate the present research, which aims at identifying new approaches to promote inclusive leisure within the context of museums through a participatory approach.

3. Research objectives

Within the context outlined in the previous paragraphs, the present research aims at promoting inclusive leisure experiences through the creation of integrated solutions for museum accessibility. Specifically, the research applies a protocol aimed at supporting the design and development of accessible and inclusive museum pathways to support visitors with disabilities, which is applied within two different case scenarios (specifically, two local museums from the Marche region). Overall, the research is directed towards answering the following research questions:

- RQ1: *What are the main facilitators and barriers that people with disabilities experience in leisure contexts and, specifically, museum experiences?*
- RQ2: *What solutions and strategies can be implemented to support accessibility and inclusion within leisure contexts and, specifically, museum experiences?*

Further into detail, RQ1 wishes to address how barriers to participation in cultural life and leisure, as anticipated in the previous chapters, often arise from a complex interaction between individuals and environments, limiting full engagement in cultural contexts. To this end, acknowledging the significant gaps between normative commitments and concrete museum practices, RQ1 aims at investigating how people with disabilities navigate and conceptualise their museum experiences, defining the main facilitators and barriers that are relevant to their experience. In this direction, the research seeks to go beyond the descriptive level of identifying obstacles from an external point of view in order to explore the systemic, relational and context-specific dimensions that are perceived by people with disabilities as relevant in shaping their cultural experience. Through such a lens, investigating these dynamics allows the research to contribute to a more comprehensive understanding of how inclusion in cultural contexts is constructed and sustained in practice by addressing the lived experiences of people with disabilities and their unique insights.

The second research question is grounded in the need to move from analysis to action, linking the identification of facilitators and barriers to the development of generative and transformative actions that can effectively promote inclusion in cultural contexts, in line with the operational trajectories previously highlighted in this work. In this sense, RQ2 emphasises the importance of integrating the question

of access as a part of the design process, providing insights on how cultural institutions can navigate and operationalise inclusion through concrete methodologies and practical lines of intervention. By addressing this question, the research aims to generate knowledge that can support professionals, educators, and policy makers in fostering accessible and meaningful museum experiences for all, with a specific focus on producing a comprehensive, transferable approach based on a co-design research protocol, as will be illustrated in the following paragraph.

4. Research design

To address the defined objectives, this research adopts a participatory approach (Hall, 1975; Cornwall & Jewkes, 1995) and a mixed-methods methodology (Plano Clark, 2017), articulated through a case study analysis related to two different museum contexts of the Marche region, within which the research was conducted. The choice of implementing the research within two case studies lies in the possibility of conducting an in-depth, contextualised exploration of complex phenomena within real settings (Thomas & Myers, 2015). As a result, this approach was found suitable for the exploration of the multifaceted nature of inclusion and accessibility within museum contexts, allowing to examine how inclusive practices can be interpreted and implemented by different stakeholders and in different scenarios (Thomas & Myers, 2015; Feagin & Orum, 2016). In this direction, the case study functions not only as a tool for description, but also as an opportunity for a deeper inquiry, which, in this case, is conceived through a participatory orientation and a mixed-methods perspective. The following paragraph will provide further details on the methodological aspects of the research, as well as its phases.

4.1 Approach and methodology

As anticipated, this research adopts a participatory research approach, specifically related to the implementation of co-design practices, and follows a mixed-methods methodology, integrating quantitative and qualitative analysis. The rationale underlying the choice of this approach and methodology will be presented below, together with specific details on their interpretation and application.

4.1.1 Participatory research and co-design approach

Participatory research can be interpreted as a collaborative approach to inquiry that reorients the basic relationship between researchers and the object of research, shifting ownership of the research process to reflect the protagonism of participants while promoting an equitable, empowering and dialogic partnership between researchers and communities across all phases of the study (Hall, 1975; Cornwall & Jewkes, 1995). In this direction, breaking from the linear and rigid design of conventional research, participatory research allows the adoption of a reflexive, flexible, and iterative process of sequential reflection and action, carried out with and by local people rather than on them (Schön, 1993; Israel et al., 2010; Giaconi & Del Bianco, 2025).

To this end, the choice of adopting a participatory research approach lies in the acknowledgement that communities' knowledge and lived experiences are a valuable resource for the promotion of inclusive processes, positioning them as active protagonists and agents of change who are capable of reflecting upon their own situations and imagining solutions and perspectives to increase participation across life environments (Sarmiento-Pelayo, 2015; Shogren et al., 2022; Del Bianco et al., 2024; Giaconi et al., 2024a). In this frame of reference, the researcher's role

was interpreted as that of a facilitator and catalyst, working alongside the stakeholders that are involved in the research process to make sure each involved actor is put in the right condition to offer their own unique contribution (Giaconi et al., 2024a; May, 2024). As a result, the primary rationale for implementing participatory research lies in its focus on generating knowledge for action, as traditional methodologies frequently fail to account context-specific priorities, processes, and perspectives (Koonts et al., 2022; May, 2024). By adopting a bottom-up focus on locally defined issues, participatory research can therefore provide deeper insights on the research topic, establishing meaningful foundations for transformative actions and interventions (Israel et al., 2010; Shogren et al., 2022; Del Bianco et al., 2024; Giaconi et al., 2024a; Giaconi & Del Bianco, 2025). Accordingly, as shown by related studies, participatory research is found to be particularly suitable for the inquiry of inequalities and exclusion phenomena, as it creates a safe and empowering space for communities to identify problems and design solutions, enhancing the effectiveness, sustainability, and appropriateness of interventions while improving the quality and social impact of research outcomes (Shogren et al., 2022; Del Bianco et al., 2024; Giaconi et al., 2024a). Ultimately, participatory research represents a commitment to long-term mutual learning, advancing equity and inclusion (Giaconi & Del Bianco, 2025).

Within the conceptual trajectories of participatory research, this research adopts co-design practices specifically. In this sense, co-design can be defined as a “process of joint inquiry and imagination”, throughout which multiple actors take part in the identification of issues and needs, the development of solutions that can respond to those, and the continuous improvement of the strategies aimed at “jointly bring about positive change” (Steen, 2013, pp. 27-28). Co-design, in this sense, consists in the conduction of practical activities that promote joint work, ownership and self-determination (Del Bianco, 2019; May, 2024), evidencing how the

contamination of different backgrounds and expertises can lead to the development of better solutions (Sarmiento-Pelayo, 2015; Giaconi et al., 2019; Giaconi & Del Bianco, 2025). As a result, co-design practices were found to be a suitable option to address accessibility beyond objectively measurable aspects, encompassing its dynamic nature and meanings, allowing for a process of structural recasting of accessibility problems (Titchkosky, 2011).

The co-design of leisure contexts (and, in our specific case, museum contexts) therefore represents a central resource to promote active participation and social inclusion of people with disabilities, allowing the reinterpretations of accessibility principles to enhance its relational and social value (Titchkosky, 2011; Giaconi et al., 2024a). In this direction, this research adopted co-design for the arrangement of activities based on dialogue, exchange, and continuous mutual feedback, with the aim of generating richer perspectives in the topic of museum inclusion and accessibility. As shown in Figure 2, co-design practices were aimed at merging Special Pedagogy expertise with community involvement (Giaconi et al., 2024a). This trajectory required the engagement of not only people with disabilities, but also that of experts in history of art and archaeology, balancing the point of view of multiple actors involved in the design of museum exhibits and expressing different perspectives and needs, as will be illustrated.



Figure 2 – Research co-design model

4.1.2 Mixed methods research methodology

In order to carry out the research and, specifically, the co-design activities, this research adopts a mixed methods design (Johnson & Onwuegbuzie, 2004; Green, 2007), which consists in the integration of both quantitative and qualitative research methods within a single study design. Such a combination allows to leverage the strengths of both methods, providing a deeper and articulated understanding of a given phenomenon (Cresswell & Plano Clark, 2018; Tashakkori & Teddlie, 2021). To this end, mixed methods research goes beyond the natural limits of conducting a quantitative or qualitative inquiry exclusively, and is based on three foundational principles (Johnson & Onwuegbuzie, 2004; Green, 2007; Cresswell & Plano Clark, 2018):

- *Triangulation*: the comparison and validation of data from different sources collected through different tools;
- *Complementarity*: the combination of different perspectives to expand and deepen understanding;

- *Integration*: the connection of quantitative and qualitative data to form a coherent analysis.

With reference to the specific mixed methods technique implemented in this research, the choice fell on convergent design, according to which data is collected and analysed separately to be subsequently integrated during the interpretation phase (Katz-Buonincontro, 2024). The motivation of such a design lies in the fact that different stages of the research and co-design activities required for the application of different tools, leaving the development of a more comprehensive approach regarding both case studies once all the stages were completed.

4.2 Research phases

In light of the identified research objectives, and within the methodological framework highlighted in the previous section, the research was developed throughout 5 procedural phases (Figure 3), which were applied to both case studies.

In phase #1 (Museum context analysis) (6 months), the research team collaborated with a group of participants with disabilities in the mapping of critical issues related to physical and cultural accessibility of the chosen museum context, highlighting the strengths and weaknesses of its exhibition path for inclusion. In phase #2 (Co-design of integrated solutions) (6 months), participants with disabilities were involved in the co-design and testing of integrated solutions for the joint development of an accessible and inclusive museum path, removing the identified barriers and ideating possible facilitators to be introduced in the context. In phase #3 (Development of integrated solutions) (9 months), the inputs, insights and feedback that emerged during the co-design activities were leveraged to

develop the integrated solutions and create a new, inclusive museum experience. Phase #4 (Museum staff training) (1 month), was dedicated to the training of museum personnel in relation to inclusive principles and practices, as well as on the technical implementation and use of the developed solutions. Lastly, during phase #5 (Final evaluation) (1 month), participants were involved in a final museum visit aimed at validating the redesigned museum context and exhibition path, identifying possible optimisations and future trajectories to increase its level of accessibility and inclusion.



Figure 3 – Research phases

4.2.1 Co-design research protocol

To design and develop museum accessibility solutions, a co-design research protocol was conceived and applied in both case studies. The protocol wishes to integrate UD/UDL frameworks while enhancing the opportunities offered by co-design practices. To this end, based on the feedbacks emerging during the museum context analysis (phase #1), the protocol guides the creation of a preliminary prototype, which is then tested and refined through the active involvement of people

with disabilities in order to assess its efficacy and validity to support an inclusive museum experience (Figure 4). The protocol foresees the following steps:

- *Identification of accessibility & inclusion requirements in the application scenario*: mapping of participants' needs and requirements through a context analysis and review of existing guidelines and standards;
- *Preliminary prototype creation*: following the identified requirements;
- *Co-design & reiterations*: testing of the preliminary prototype with participants, joint work to identify emerging challenges and solutions through participatory research methodologies, refinement of the prototype according to the identified solutions (multi-stage process);
- *Creation of the inclusive museum experience* (including museum staff training).

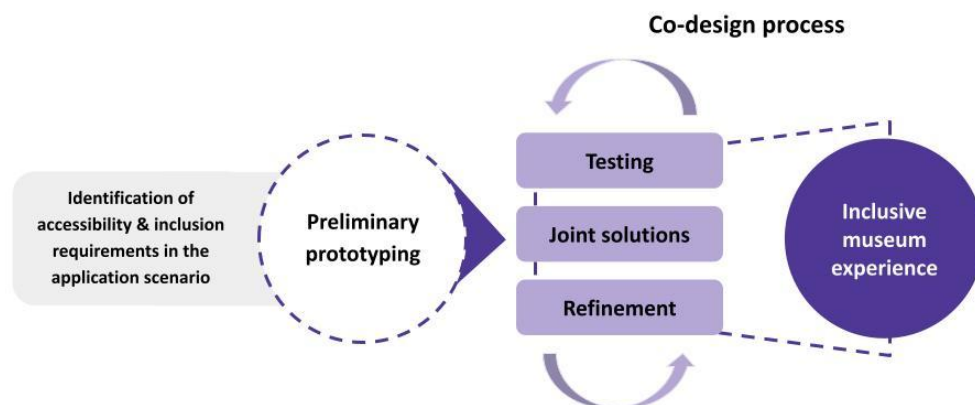


Figure 4 – Co-design research protocol

Each phase of the protocol was structured to progressively optimise both the co-design process and the resulting accessibility solutions. As the preliminary prototype creation translates the frameworks of UD and UDL standards into

tangible features while incorporating participants' feedbacks, the testing and refinement phases offer opportunity to further ground such principles in context-specific domains, actively engaging people with disabilities in the identification of possible criticalities and related improvements in a reiteration process based on testing cycles. As anticipated, this co-design research protocol was operationalised through two case studies related to two different local museums (as will be later presented).

4.3 Research tools

In line with the research phases and the co-design protocol previously described, a combination of qualitative and quantitative tools was implemented to collect and analyse data throughout the research phases, ensuring a comprehensive understanding of the dynamics under investigation, as anticipated.

In the first place, quantitative data was collected through the administration of two questionnaires across phases #2 (Co-design of integrated solutions) and #5 (Final evaluation). The first questionnaire consists in the System Usability Scale (SUS) (Brooke, 1996, 2013), which is administered to assess the technical functionalities and overall accessibility of technological prototypes. The tool allows participants to express their agreement or disagreement with 10 statements through a 10-point Likert scale (in which 1 corresponds to "Strongly disagree", and 10 corresponds to "Strongly agree"), with an overall minimum score of 10 and a maximum score of 100 (Table 1). The questionnaire, in addition to providing an objective measure of the level of accessibility to a specific product, service or

context, allows the comparison between different prototypes and application scenarios.

Table 1 – System Usability Scale items (Brooke, 1996, 2013)

No.	Item
1	I think that I would like to use this system frequently
2	I found the system unnecessarily complex
3	I thought the system was easy to use
4	I think that I would need the support of a technical person to be able to use this system
5	I found the various functions in this system were well integrated
6	I thought there was too much inconsistency in this system
7	I would imagine that most people would learn to use this system very quickly
8	I found the system very cumbersome to use
9	I felt very confident using the system
10	I needed to learn a lot of things before I could get going with this system

The second quantitative tool applied to collect data consists in a questionnaire based on Pine & Gilmore’s four dimensions of experience (2011): *Education*, *Entertainment*, *Escapism* and *Aesthetics*. The tool allows researchers to investigate participants' user experience (UX) when interacting with a product, service or context related to cultural heritage, with a specific focus on the balance between aspects linked to enjoyment and learning (Leopardi et al., 2021). Specifically, it consists of 16 questions (four for each domain) to which participants can answer through a 7-point Likert scale (in which 1 corresponds to “Not at all”, and 7 corresponds to “A lot”), with an overall minimum score of 4 and a maximum score of 28 in each dimension (Table 2).

Table 2 – User experience questionnaire

No.	Dimension	Question
1	<i>Education</i>	To what extent did the entire experience stimulate your curiosity?
2		How much did the entire experience increase your desire to learn more about the artefact?
3		To what extent did this experience increase your attention to the details of the artefact?
4		How much did you learn about the artefact from this experience?
5	<i>Entertainment</i>	To what extent would you like to repeat this experience?
6		To what extent did this experience emotionally stimulate you?
7		How much did you enjoy yourself during this experience?
8		To what extent was this experience unusual for you?
9	<i>Escapism</i>	To what extent did you lose track of time?
10		To what extent did you lose track of where you are?
11		To what extent did you feel out of touch with reality?
12		To what extent do you feel you were not the one interacting with the artefact
13	<i>Aesthetics</i>	To what extent do you feel this experience was better than what you would have had with the real artefact?
14		How pleasant was it to experience this technology?
15		How attractive did you find the virtual artefact?
16		How attractive did you find the technology you experienced?

Qualitative data was collected through the conduction of focus groups (Liamputtong, 2011) involving people with disabilities. Specifically, focus groups were used as a tool to deepen the researchers' understanding of participants' experiences and perspectives, with the aim of mapping accessibility needs during

the context analysis (phase #2), identifying inclusive strategies to implement the chosen museum context through co-design (phase #3), and providing a final assessment and evaluation when visiting the redesigned museum path (phase #5). In this direction, the choice of conducting focus groups was motivated by the intention of fostering interactive discussion and dynamic feedback, enabling participants to share diverse perspective, co-construct shared meanings, and generate rich, collective insights (Liamputtong, 2011; Giaconi et al., 2024a). Participants' insights were analysed through the application of Qualitative Content Analysis (Schreier, 2012), in order to identify recurring themes and develop a cohesive theoretical framework to organise and interpret qualitative data. This process enabled the categorisation of participants' perceptions, experiences, and suggestions into conceptual clusters, supporting the emergence of grounded interpretations related to their experiences (Schreier, 2012; Giaconi et al., 2024a).

5. Summary and implications

This chapter introduced the research that will be presented within the wider topic of promoting inclusive leisure contexts to support the Quality of Life of people with disabilities (Cottini, 2024; Giaconi & Del Bianco, 2025). In this direction, Special Pedagogy studies highlight how the pedagogical value of free time pursuits is grounded both in the need to promote co-design trajectories, which can generate shared frameworks of action and higher social impact, and inclusive training in leisure personnel, which can enhance knowledge, competencies, and agency for the promotion of a culture of accessibility and participation of all people (Giaconi, 2015; Giaconi et al., 2024a, 2024b; Giaconi & Del Bianco, 2025). As illustrated, the research proposed in this work focuses on museums and cultural life

participation as a specific leisure dimension, finding its rationale in the widespread recognition that cultural heritage fruition can represent a means through which community belonging, personal development and social inclusion can be fostered (Giaconi et al., 2021; Shogren et al., 2022; Del Bianco et al., 2024; Giaconi et al., 2024a). It is in light of these considerations that the research group in Special Pedagogy at the University of Macerata contributed to two research projects related to cultural life and, specifically, museum accessibility.

Throughout the chapter, we defined the research background on the topic of museum accessibility. Specifically, the research hereby proposed was contextualised within the national and international regulations that aim at affirming the centrality of museums as spaces for individual and collective wellbeing, providing guidelines and indications to orient museums and cultural institutions in the navigation of cultural, social and technological change, with the final aim of increasing their reach and inclusivity to promote the engagement of all people, including those with disabilities (UN, 2006). As outlined, the principles and trajectories outlined by policy makers reflect a wider, cultural shift that is referred to as new museology (Ross, 2004), which focuses on the recognition of museums as spaces for social care and community development. However, it was noted how the horizons outlined by policies and research on new museology do not necessarily imply a consistent, widespread and homogeneous impact in museums' level of accessibility, as photographed by recent statistics (ISTAT, 2022). Moving in the awareness that accessibility, although widely explored from a theoretical point of view, represents a challenging dimension to be achieved in practice, we then presented a pedagogical reading of this concept, highlighting it from a human rights perspective (UN, 2006) and a systemic, bio-psycho-social perspective (WHO, 2001). These reflections supported the presentation of Universal Design (Connell et al., 1999) and Universal Design for Learning (CAST, 2024) as relevant

operational trajectories to work on accessibility and inclusion with a pedagogical perspective (Savia, 2016; Aiello & Giaconi, 2024; d'Alonzo & Giaconi, 2024). Lastly, after outlining the frame of reference for the conceptualisation of museum accessibility, we proceeded with a brief reconnaissance of the main solutions and best practices implemented to promote accessible and inclusive cultural experiences within museums, with a specific focus on technological innovation (Giaconi et al., 2024a). In general, the outlined research background appears to be a challenging and complex scenario, in which the tension between theoretical knowledge and operational practices related to museum accessibility calls upon the need to create new approaches based on participatory methodologies and pedagogical expertise (Creed et al., 2024a, 2024b; Giaconi et al., 2024a).

Within this context, we described the research objectives, methodology, and phases. With reference to objectives, on the one hand, the research aims at identifying the main facilitators and barriers that people with disabilities experience in museum contexts, adopting a context-oriented and person-centred perspective; on the other hand, the research also seeks to identify and develop solutions and strategies that can be implemented to support accessibility and inclusion within museum paths, promoting a more inclusive leisure culture through the provision of transferable procedures and integrated solutions.

To achieve such objectives, as outlined, this research adopts a participatory approach (Hall, 1975; Cornwall & Jewkes, 1995), specifically leveraging co-design practices (Steen, 2013; Giaconi et al., 2024a). and a mixed methods design (Cresswell & Plano Clark, 2018; Tashakkori & Teddlie, 2021) in two different case study scenarios related to two local museums of the Marche region. As illustrated, a participatory and co-design approach was chosen to promote full protagonism and empowerment of people with disabilities, which allows for the generation of deeper, more meaningful insights and the increase of the effectiveness and social impact of

the research action (Giacconi et al., 2024a). Furthermore, the adoption of a mixed methods approach was found to best fit the scopes of the research, allowing a flexible way to collect both quantitative and qualitative data and converging those during the interpretation phase (Cresswell & Plano Clark, 2018). After outlining the methodological framework, we presented the specific research phases that took place, which move from the analysis of the museum context up to the joint design and development of integrated solutions that can foster accessibility and equal participation opportunities, through the adoption of a specific, iterative co-design research protocol. Lastly, the research tools implemented in the various phases of the research were presented.

Building upon this framework, the following chapter presents the two case studies within which the research was conducted, providing a detailed account of their contexts, methodological development, and key outcomes. In this sense, the research process is illustrated step by step for both case studies, with two specific co-design focuses, highlighting the dynamics and challenges encountered in both settings. As a result, the parallel analysis allows for an in-depth exploration of key opportunities and limitations in shaping innovative practices for inclusive leisure contexts.

6. Case study application scenarios

1. Foreword

The previous chapter provided the frame of reference for the research that will be presented in the following sections, through the illustration of two case studies related to museum accessibility. In general, as it was possible to understand, the level of inclusion that people with and without disabilities can experience across life contexts is directly connected to the concrete levels of involvement that they are able to achieve within cultural and social environments (Giaconi, 2015; Giaconi & Del Bianco, 2025). As noted by Shogren et al., (2022), such considerations define museums as spaces that, if accessible, can foster people's worldview and self-determination skills, allowing greater participation opportunities. In this direction, access to the tangible and intangible heritage offered by museums, which enshrine culture, tradition, history and community meaning, can increase the levels of social inclusion, and Quality of Life experienced by people with disabilities (Shogren et al., 2022; Giaconi et al., 2024a).

Within this framework, the case studies that will be presented are related to two different projects aimed at the redesign of a specific local museum each, with the final objective of improving the levels of accessibility and inclusion it can offer to all visitors, including those with disabilities. The research group in Special

Pedagogy, to this end, contributed to the projects throughout the co-design, development and testing of accessible and inclusive museum pathways integrated with didactic contents, advancing a vision that promotes cultural heritage enhancement through a network-based, participatory approach, based on the direct involvement of associations that promote the inclusion of people with disabilities (Seale et al., 2021; Shogren et al., 2022; Del Bianco et al., 2024; Giaconi et al., 2024a). As highlighted in the previous chapter, inclusive museum trajectories not only unfold in the creation of physically accessible spaces, but also in the definition of multiple channels of expression, communication and interaction with culture, knowledge and information enshrined in the museum spaces (Giaconi et al., 2024a). The main result of both projects, as will be illustrated, consists in an integrated path that combines the development of accessible storytelling paths and didactic materials, the use of innovative technologies, and the implementation of multimodal interaction devices, alongside the training of museum staff for the acquisition of key knowledge and competencies related to inclusive process within museum contexts (Shogren et al., 2022; Caldarelli et al., 2023; Giaconi et al., 2024a).

The chapter is structured as follows. Firstly, in section two, we will present the two case studies, with a focus on the specific project each case study is related to, as well as the history, characteristics and context of the local museum within which it takes place. Section three will present the first phase of the research, which is related to the museum context analysis (phase #1), illustrating the insights emerging from the mapping of facilitators and barriers within the two museums to highlight similarities and differences between the two case studies. Section four will move to the presentation of the co-design activities and development of inclusive solutions for both museums (phases #2 and #3), following the shared co-design protocol presented in the previous chapter, and providing a specific focus on the co-design

of a specific inclusive and technology-based solution for each case study. As section five will present the museum staff training activities, related to both case studies (phase #4), the last section of this chapter will present the final evaluation of the redesigned museum paths (phase #5), alongside some critical reflections about the two case studies.

2. Case studies presentation

As anticipated, the research presented in this work is based on two case studies that consist of two research projects in which the research group in Special Pedagogy of the University of Macerata was involved. Both projects are related to the creation of an inclusive and accessible museum path within a local museum of the Marche region. Specifically, the first case study focuses on the Civic Archaeological Museum “Aristide Gentiloni Silverj”, which is located in the north wing of the Rancia Castle (Tolentino, in the province of Macerata), within the Project named “Incluseum. Inclusive Museum Paths at Aristide Gentiloni Silverj”. The second case study focuses on the Museum of Monastic Arts (Serra de’ Conti, in the province of Ancona), within the Project named “Museum InclusionL@b. Multisensory Accessibility Experiences”. With reference to the involvement of people with disabilities through the connection with local associations, both projects saw the participation of the local branch of the associations U.I.C.I. (Unione Italiana Ciechi e Ipovedenti) and A.N.F.A.S.S. (Associazione Nazionale di Famiglie e Persone con disabilità intellettive e disturbi del neurosviluppo).

The following sections provide further detail regarding the two museums and the respective projects.

2.1 Case study I: the Project “Incluseum. Inclusive Museum Paths at Aristide Gentiloni Silverj”

The Project “Incluseum. Inclusive Museum Paths at Aristide Gentiloni Silverj” was funded by the European Union, NextGenerationEU, Mission 1 – Digitisation, innovation, competitiveness and culture, Measure 1 “Cultural heritage for the next generation” – Component 3 – Culture 4.0 (M1C3-3), Investment 1.2: “Removal of physical and cognitive barriers in museums, libraries and archives to allow wider access and participation in culture”. Specifically, investment 1.2 aims at increasing the physical and cultural accessibility of museums, libraries and archives through the implementation of innovative technological solutions (such as XR technologies, interactive devices and virtual contents) and the redesign of cultural fruition environments to welcome diverse needs.

The Project involved the University of Macerata as scientific coordinator. Specifically, the research group in Special Pedagogy collaborated with a group of archeologists from the same university and the Municipality of Tolentino, as well as a group of people with disabilities recruited through local associations. Based on the specific expertise of the research group in Special Pedagogy, the group was involved in the co-design activities related to the creation of accessible and inclusive storytelling and interaction technologies for people with disabilities.

The “Aristide Gentiloni Silverj” Civic Archaeological Museum¹¹, also known as the Civic Archaeological Museum of Tolentino, located in the north wing of the Rancia Castle (province of Macerata), houses one of the most significant collections representing the Picene civilisation in the Marche region, alongside a notable section devoted to archeological finds from the Roman period, which refer to the

¹¹ www.tolentinomuseicivici.it

ancient settlement of Tolentinum. Established in 1882, the museum is one of the oldest of the Marche region, and was dedicated to its founder, Count Aristide Gentiloni Silverj (1844-1936), who was Royal Inspector of Excavations and Monuments for the Province of Macerata from 1880, an eminent scholar of archeology and history, and the Museum's Director until his death. The Museum's first core collection originated from excavations conducted by Silverj between 1879 and 1882 in Picene necropolises discovered around Tolentino (specifically, Settedolori, Rotonda, Bura, Benaducci, and Sant'Egidio), to then progressively expand through private donations and archaeological discoveries by the Superintendency of Archaeology.

Currently, the "Aristide Gentiloni Silverj" Civic Archaeological Museum is located on two floors within the northern wing of the Rancia Castle. The exhibition features displays and panels related to the evolution of the region, from the Lower Paleolithic onward, with a particular focus on the city's earliest history and territory. The majority of the exhibited artefacts derive from 19th-century excavations and isolated local finds. The specific area that was subject to the intervention of the Project is the main hall on the first floor, which contains an introductory section dedicated to Gentiloni Silverj himself, along with a display of lithic materials from the surrounding area. There, visitors can explore grave goods from the necropolises, occasional finds, and a selection of Roman-era artefacts, including inscriptions from ancient Tolentinum, offering a comprehensive journey through the region's archaeological heritage. Overall, the museum collection hosts more than 1600 exhibits from different time periods, most of which were collected in the near territory.

In general, the origins of its collection make the Museum a central cultural site for the territory, in close connection with other museums, both neighbouring and outside the region, underlining the need to create a more advanced and inclusive

system for its fruition. The importance of the Museum lies in its close connection with its territory, which represented a strategic landmark during the Picene period and led to the collection of valuable and historically significant artefacts over time, witnessing the Picene community's history and evolution. Although the Museum already offered visitors Braille captions and supports before the Project was started, it was lacking a more comprehensive system of accessibility and inclusion in its cultural heritage, which was proven by the scarce attendance of youth and adults with disabilities. To this end, the Project is based on the redesign of the Museum's exhibition paths to increase its inclusivity and enrich the experiences it offers through the integration of innovative technological solutions.

2.2 Case study II: the Project “Museum InclusionL@b. Multisensory Accessibility Experiences”

The Project “Museum InclusionL@b. Multisensory Accessibility Experiences” was funded through the same grant line of case study I, that is to say through European Union, NextGenerationEU, Mission 1 – Digitisation, innovation, competitiveness and culture, Measure 1 “Cultural heritage for the next generation” – Component 3 – Culture 4.0 (M1C3-3), Investment 1.2: “Removal of physical and cognitive barriers in museums, libraries and archives to allow wider access and participation in culture”. In this sense, the two case studies appear to be aligned in terms of aims and scopes, as the research that was conducted within both follows the same operational trajectories, linked to the promotion of accessible exhibition paths and the application of innovative technological solutions to promote inclusion within museum contexts.

Similarly to the first case study, the Project involved the University of Macerata as scientific coordinator. Specifically, the research group in Special Pedagogy

collaborated with the same group of archeologists from the University of Macerata, the Municipality of Serra de' Conti, and the same group of people with disabilities recruited through local associations in case study I. Drawing on the research group's specific expertise in Special Pedagogy, the team contributed to the development of accessible and inclusive storytelling and interactive technologies for people with disabilities through co-design activities also in this case.

The Museum of Monastic Arts "Le Stanze del Tempo Sospeso" of Serra de' Conti¹², located in the province of Ancona, was established in 2002 in the underground spaces of the Town Hall, which was originally a 14th-century Franciscan convent, with the aim of preserving the rich cultural heritage of the Poor Clares, housing a collection of objects that belonged to their community living in the neighbouring Monastery of Santa Maria Maddalena. The Monastery dates back to the 16th century, and grew in wealth and prestige during the 17th century, nurturing and maintaining a strong bond with the civic community, which ultimately inspired the creation of the Museum. As the Museum gathers and exhibits objects of the material and daily life of the Poor Clares of the cloistered Monastery of Santa Maria Maddalena, it wishes to immerse visitors in the environment of a Monastery, its stories and atmospheres, showcasing the tangible and intangible heritage related to the life and habits of Poor Clares.

Today, the museum itinerary unfolds across several thematic spaces. Starting from an introductory selection that narrates the history of the convent and its relationship with the surrounding territory, the visit continues through rooms that are dedicated to the apothecary, pantry, kitchen, refectory, and cellars of the original Monastery. The Museum includes a collection of antique irons and a display of communion wafers, while the final area reconstructs the workshop of the nuns, showcasing their traditional activities such as weaving, wax modelling, flower

¹² www.museoartimonastiche.it

composition, embroidery, bobbin lace-making, and fabric dyeing. The Museum underwent a major renovation in 2015, following the Regional Government Resolution No. 954 of August 4, 2014, which led to the integration of an intervention aimed at promoting accessibility for people with disabilities.

In conclusion, the nature and history of the Museum of Monastic Arts “Le Stanze del Tempo Sospeso” make it a pivotal cultural institution for the local territory, deeply intertwined with Serra de’Conti and its heritage, preserving, witnessing, and reinterpreting the material and spiritual culture of the Poor Clares. As the Monastery was closed to the public in 2010, the Museum survives as a space that can share with the public not only the history of a monastic community, but also its lifestyle, which was in constant dialogue with the outside world. The Museum, therefore, ended up representing a driving force for the revitalisation of the city and its surrounding territory. Although the 2014 intervention introduced accessibility initiatives, the Museum still raised the urgency and necessity to be adapted to current accessibility standards, especially in light of the multiple levels of flooring through which it is articulated, lacking a fully integrated system to promote accessibility and inclusion for all visitors, including those with disabilities. As a result, the Project focused on the redesign of its exhibition routes and spaces, with the aim of promoting a more engaging and multisensory understanding of its collection.

3. Museum context analysis

As anticipated in the previous chapter, the first phase of the research conducted within the two projects is based on the museum context analysis. In this sense, the research team, in collaboration with a group of people with physical, sensory and

intellectual disabilities, engaged in a comprehensive visit and exploration of the exhibition paths offered by both museums. Specifically, the visit of both case study scenarios involved a group of 4 people with intellectual disabilities, 4 people with visual disabilities, and 3 people with physical disabilities, as well as some caregivers without disabilities for a total of 16 participants. Following the visit of each exhibition path, participants were involved in a focus group (Liamputtong, 2011) conducted in person and aimed at identifying strengths and weaknesses of the museum in terms of accessibility, defining the facilitators and barriers they encounter to then collectively discuss the main issues experienced and imagine possible solutions to overcome and remove those barriers while increasing opportunities for active participation and inclusion.

To this end, the following guiding questions (GQ) were posed to participants during both focus groups, to stimulate the discussion and facilitate joint reflection:

- GQ1: *With reference to your recent visit to the exhibition path, what were the main facilitators to accessibility you encountered and how did those support your museum experience?*
- GQ2: *With reference to your recent visit to the exhibition path, what were the main barriers to accessibility you encountered and how did those limit your museum experience?*
- GQ3: *Are there any solutions or strategies you can think of to further leverage the facilitators you encountered and increase their positive impact?*
- GQ4: *Are there any solutions or strategies you can think of to contain and/or remove the barriers you encountered to avoid their negative impact?*
- GQ5: *Are there any other insights you would like to share regarding your museum experience to increase opportunities for inclusion?*

As anticipated in the methodology section, insights emerging from the focus groups were analysed through Qualitative Content Analysis (Schreier, 2012), with the aim of developing a coherent framework to organise main facilitators, barriers and solutions brought up by all participants, providing a solid foundation for the co-design and development activities (Giacconi et al., 2024a). The following sections illustrate the specific results obtained for each case study.

3.1 Case study I: facilitators and barriers

With reference to the “Aristide Gentiloni Silverj” Civic Archaeological Museum, participants provided multiple insights regarding their museum experience, opening up meaningful spaces for joint discussion and reflection upon the best solutions that could be implemented to increase the museum’s level of accessibility, as shown in Figure 1.

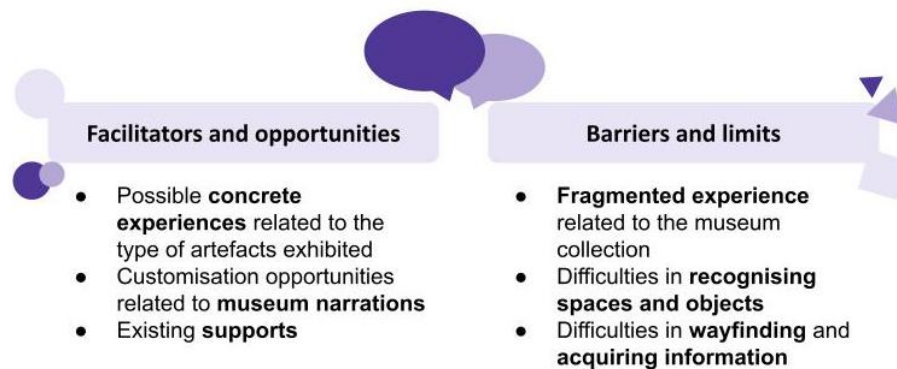


Figure 1 – Insights from focus group of case study I

Starting from the facilitators and opportunities identified by participants, the possibility of promoting concrete experiences thanks to the type of artefacts exhibited in the museum emerged as a strength of the exhibition path. Specifically,

the archaeological nature of the collection—comprising objects and tools—supports leveraging a tactile and/or experiential engagement. Participants underlined how such materials lend themselves to hands-on activities and to the creation of inclusive educational experiences possibly aimed at multiple audiences, including people with disabilities. The strong connection between the exhibited artefacts and the local territory, in this direction, emerged as a significant element, reinforcing the museum's concrete nature and interconnectedness with the territory. According to participants, these aspects could highlight the museum's potential not only as a site for display, but also as a space for more engaging and interactive experiences.

Another potential underlined by participants was the possibility, among the richness of the Museum's collection, to create customisable paths based on visitors' interests and preferences. Indeed, the presence of multiple thematic sections and a wide chronological span was considered potentially suitable for designing differentiated narrative paths and educational contents. Such flexibility would also allow the Museum to better respond to the needs of various audiences, including school groups, families, and elderly people. Participants noted how such an approach could foster the educational value of the museum exhibit particularly, aligning the context to more inclusive and person-centred experiences and practices for cultural heritage fruition.

Lastly, among the identified facilitators, participants emphasised the usefulness of the existing accessibility supports already available in the Museum, such as Braille captions. These tools were recognised as valuable starting points for developing a more comprehensive and integrated inclusive experience. In this regard, participants noted how, if effectively leveraged, these solutions could represent not only a factor of engagement for visitors with disabilities, but also an added resource for all people, encouraging a more direct experience in the case of

tactile reproductions and similar supports. In this sense, participants suggested that such existing supports should be expanded, diversified, and better integrated within the overall exhibition path.

With reference to the barriers encountered by participants, the first element that was recorded by researchers during the focus group concerned their overall perception of the visit, which was generally described as fragmented and challenging to interpret as a cohesive experience. Specifically, participants emphasised that the absence of a coherent and systematic approach to accessibility within the museum context limited their chance to follow the exhibition narrative and fully understand the chronological and thematic connections among the different sections of the museum. This lack of a global strategy was therefore seen as a major obstacle to participation, as a visitor with disabilities would face challenges in constructing meaningful connections across the various artefacts and topics, ultimately reducing the educational and cultural impact of the museum visit.

Additionally, participants noted criticalities regarding visual distinction of spaces and the recognition of objects along the exhibition path. In particular, they pointed out that the display panels and explanatory labels often lacked sufficient colour contrast, making the written information difficult to read, and were visually overwhelming due to an excessive number of graphic and textual elements, which created perceptual overcrowding. Furthermore, the presence of glass display cases, in combination with the existing lighting system would create issues of glare and unwanted light reflections, which not only hindered the visibility of the artefacts, but also contributed to visual fatigue during the visit. In some instances, the limited contrast between the objects and their background within the display cases made it challenging to discern the details and shapes of the archeological finds. These conditions were perceived as obstacles to both aesthetic appreciation and

understanding of the exhibition contents, reinforcing the need for an effective redesign of the context.

Lastly, participants noted considerable difficulties in wayfinding and orientation within the museum space. They underlined the absence of clear spatial information and guidance systems, which particularly affected visitors with visual disabilities. The lack of tactile maps, directional signage, or other spatial cues made it challenging to develop a coherent mental representation of the exhibition layout, often leading to a sense of disorientation and dependence on accompanying caregivers or staff. Participants emphasised that these limitations significantly reduced the level of autonomy that people with disabilities could exercise throughout the visit, suggesting that enhancing such aspects would not only support independent navigation, but also foster a greater sense of confidence and engagement during the museum experience.

3.2 Case study II: facilitators and barriers

With reference to the Museum of Monastic Arts “Le Stanze del Tempo Sospeso”, it was possible to observe similar observations and context-specific insights in the analysis of participants’ joint discussion throughout the focus group, as shown in Figure 2.

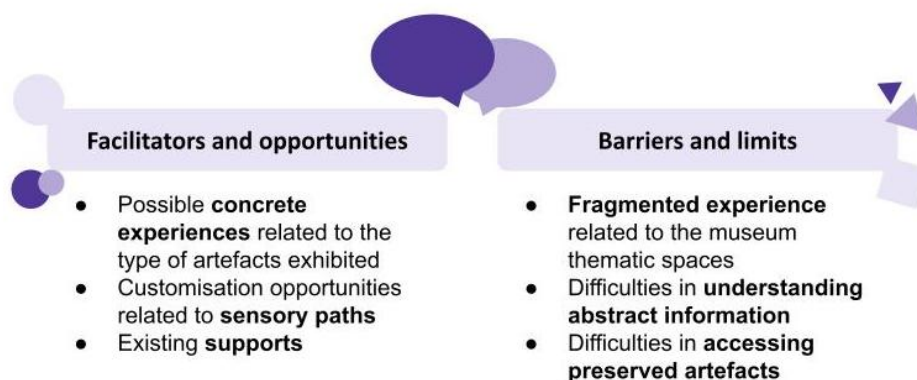


Figure 2 – Insights from focus group of case study II

With reference to the facilitators and opportunities identified by participants in relation to the museum, they similarly recognised—as in the case of the Archaeological Museum—the value of grounding the museum experience in a tangible and practical dimension. The artefacts displayed in the Museum, indeed, are directly connected to everyday monastic activities, such as weaving, embroidery, wax modeling, and herbal preparation, thus offering visitors an immediate link to the lived experiences of the Poor Clares. Participants highlighted how this connection between material culture and daily life practices represents a significant opportunity to foster understanding and learning. As a result, a proper storytelling built around the sensory and craft-based nature of the collection, according to visitors, would lend itself particularly well to the development of interactive and participatory educational experiences.

Another important aspect raised during the focus group concerned the potential to develop sensory experiences inspired by the museum’s exhibits, which could in turn support the creation of personalised visiting paths. Participants noted that the Monastic Art Museum, due to the tangible nature of its collection, could offer opportunities to engage the senses—through touch, sound, and smell—in ways that could deepen visitors’ understanding of monastic life. The integration of sensory-

based experiences, in this direction, would not only enhance accessibility for people with disabilities, as it could represent a resource to increase all visitors' engagement and participation in the museum context, transforming the museum into a customisable and inclusive learning environment.

Lastly, as noted in the focus group related to case study I, participants appreciated the existing accessibility supports implemented within the exhibition, which were regarded—in a similar manner—as potential starting points to develop more integrated and comprehensive inclusive strategies. In this sense, they noted how channeling accessibility resources through an integrated approach based on coherent storytelling paths would broaden access and engagement for all visitors, encouraging active participation. To this end, participants suggested expanding and diversifying accessibility supports while maintaining a homogeneous framework within which they are presented, ensuring their systematic integration along the exhibition route for a coherent and inclusive narrative.

In relation to the barriers identified by participants, the first critical aspect emerging from the focus group concerned their overall experience of the visit, which was described as fragmented. Although the exhibition presents a coherent narrative on monastic life, participants observed that the absence of integrated accessibility strategies limited their possibility to properly follow the storyline and grasp the relationships among the different thematic sections and spaces of the exhibit. It appears clear how this topic mirrors what had already emerged in case study I, confirming that the lack of a global and structured approach to accessibility represents a recurring issue across museum contexts. In this specific case, this challenge was particularly evident in the discontinuity of interpretive tools and mediating supports, hindering the understanding of connection between spaces and narratives of monastic life. As a result, participants stressed the need to overcome these barriers by working on aspects like continuity, autonomy, and inclusion.

In the second place, participants highlighted the difficulty in understanding abstract or complex information presented throughout the exhibition, pointing out how technical terminology, historical references, and chronological jumps, when not adequately contextualised or explained, create challenges in understanding and grasping the cultural content for all visitors, particularly those with intellectual disabilities. In general, the group agreed upon the fact that difficult terms and, more generally, a complex communication style, would represent a barrier to the general public, as the absence of simplified explanations would limit comprehension and engagement. This insight was particularly relevant, as some participants noted the same issue during case study I, although they did not discuss it with such emphasis as in this case. As a result, participants highlighted the need to facilitate understanding and comprehension of informative supports, ensuring that all visitors could meaningfully connect with the historical and cultural depth of the exhibit.

Lastly, participants reported two major challenges related to accessing the exhibition's spaces and artefacts. The first concerned physical accessibility, as the museum's structure—distributed across multiple levels—was found to be difficult to access and navigate, particularly for visitors using mobility supports. The absence of alternative pathways, in this sense, limited the possibility of moving independently between the exhibit's different spaces. The second issue related to the lack of direct interaction with the exhibited artefacts, preserved within glass display cases for conservation purposes. Participants noted that this arrangement, while necessary for preservation, reduced opportunities for tactile engagement, resulting in a limitation for more immersive or participatory museum experiences.

3.3 Considerations on the museum contexts

The mapping of facilitators and barriers related to the two museum contexts interestingly revealed how the two exhibition paths would present a complex and multifaceted set of dimensions that must be addressed to promote truly inclusive cultural experiences. In this sense, phase #1 of the research proved how accessibility is perceived and experienced as a challenging interplay between environments and individuals, recalling, in the context of museum exhibits, elements such as spatial design, cultural accessibility, and visitor engagement. When examined together, the challenges and opportunities highlighted in each museum offered a broader understanding of how inclusion can be embedded within cultural heritage practices.

From this comparative process, three key trajectories emerged, which provided a solid foundation for the following phases of the research, as shown in Figure 3.

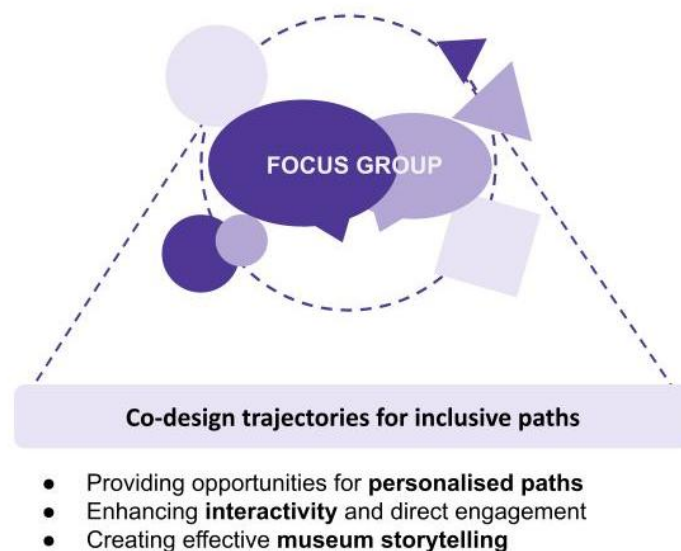


Figure 3 – Co-design trajectories identified through the focus groups

Specifically, the first trajectory concerns the importance of providing opportunities for personalised visiting paths, allowing visitors to adapt their experiences according to personal interests and preferences. Such a trajectory

underlines the reading of leisure as a context that can promote self-determination opportunities, as already noted (Del Bianco, 2019; Shogren et al., 2022; Giaconi & Del Bianco, 2025), and also points at the opportunities offered by innovative technologies in embedding personalised experiences within integrated systems (Giaconi et al., 2024a).

The second trajectory emerging from the focus groups focuses on enhancing interactivity and direct engagement with cultural artefacts, fostering multisensory experiences that can be leveraged through tactile, auditory, or digital supports more in general. Such a trajectory affirms the centrality of adopting approaches that follow the frameworks of UD and UDL (Savia, 2016; Aiello & Giaconi, 2024), suggesting how the level of participation that museum contexts promote is directly connected to opportunities for learning and engaging with culture, representing a focal point to foster the meaningfulness of cultural heritage fruition, and again touching upon the potential of technological devices.

Finally, the third trajectory highlights the importance and centrality of creating effective, coherent and accessible museum storytelling paths, which would serve as the true frames within which the visitor can situate objects, spaces, and histories in ways that can be meaningful from an individual and collective point of view. By addressing cultural accessibility as a symbolic gateway to social inclusion within cultural heritage contexts, participants confirmed the central role of community engagement in shaping storytelling paths that can balance the need to maintain historical accuracy of informative contents with the need to foster broader understanding and participation.

In general, it was possible to assess how both museums revealed the presence of some initial accessibility measures already present in the context. However, these efforts appeared to be fragmented and limited, lacking the comprehensive and systemic orientation that emerged as a key gap in the literature review presented as

background to this research. The three trajectories identified—providing opportunities for personalised paths, enhancing interactivity and direct engagement, and creating effective museum storytelling paths—thus represent not only strategic directions for developing inclusive solutions, but also a clear evidence of the need to move toward an accessibility-by-design approach, where inclusion can become a structuring dimension of museum planning and communication.

As will be presented in the following section, the insights emerging from both focus groups led to the creation of an integrated system that could include accessible storytelling paths, didactic materials, supports to accessibility, and technological devices for multimodal interaction, to be implemented in both case studies, incorporating the reflections and suggestions emerging from this initial mapping phase.

4. Co-design and development of integrated solutions

Building upon the museum context analyses (phase #1), the research team moved onto the next two phases, consisting in the co-design and development of accessibility solutions (phases #2 and #3). After comparing the insights emerging from the two focus groups and identifying how participants expressed shared visions, priorities, and accessibility needs, the research group initiated a co-design process aimed at developing an integrated system supported by technological devices for multimodal interaction that could be applied to both museum contexts, as will be detailed in the following section.

4.1 Integrated system

The integrated system that was co-designed and developed in phases #2 and #3 was conceived not as a standalone device, but rather as a flexible framework capable of adapting to different exhibition settings and visitor needs, thereby reinforcing the principles of accessibility-by-design. Taking into account the results of phase #1, the research team identified the following paths to be combined within a comprehensive system (Figure 4):

- *Haptic and tactile path*: implementation of tactile supports and design of tactile horizontal pathways to increase engagement and autonomy in the exploration of the exhibition spaces and contents;
- *Easy to Read path*: implementation of accessible textual and audio storytelling to increase understanding of information and cultural contents presented in the exhibit;
- *AR and VR path*: design and development of XR contents to increase the accessibility of exhibited artefacts and the direct engagement of audiences.

The three paths converged in the creation of didactic materials offered to visitors before, during, and after the visit, aimed at enhancing the museum learning experiences by increasing personalisation, autonomy, and engagement. Such materials are delivered through an integrated system, which was structured through the study, co-design, and development of devices for multimodal interaction that could encompass the different accessibility solutions and contents, supporting a global, cohesive museum experience. Specifically, as will be presented later in this chapter, a Virtual Museum (VM) mobile app and a Virtual Museum desktop app were co-designed and developed in both case studies, I and II.

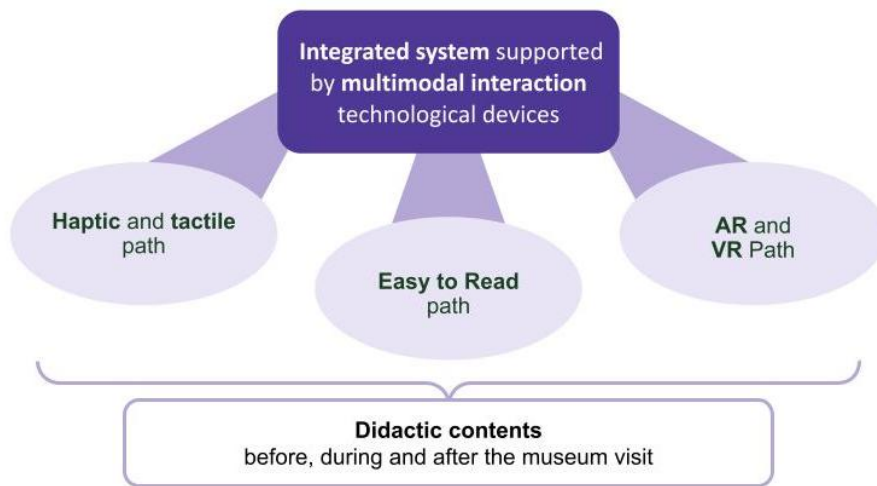


Figure 4 – Integrated system for museum accessibility

With reference to the haptic and tactile path, in the first place, a haptic feedback device was introduced in both museum contexts to support the tactile exploration of the exhibits' artefacts, allowing visitors to interact with authentic digital reproduction by simulating the sense of touch, embedded in a Virtual Museum desktop app, as will be later presented. In the second place, to ensure the accessibility of both museums' exhibits, the research group carried out a study aimed at designing tactile horizontal guide paths. In this regard, the LOGES Guidelines were applied (I.N.M.A.C.I., 2023) to guarantee the independent and safe navigation of the museum spaces for people with visual disabilities, in compliance with current regulations and standards. Following an initial site inspection—conducted together with expert architects—to assess the spatial configuration of the museum route, a detailed planimetric study was undertaken to determine the design and placement of the tactile surfaces (Figure 5). The final path, complemented by an orientation tactile map installed at the entrance of both museums and the application of removable tactile strips on stairs and handrails, was built by embedding tactile tiles in the flooring corresponding to the following codes: straight

direction; passable hazard; attention/service area; obligatory 90° turn; intersection (Figure 6). As a result, the activities allowed for the provision of significant benefits for both content accessibility and visitor autonomy, enhancing the audiences' confidence and comfort within the museum space while promoting an inclusive environment.

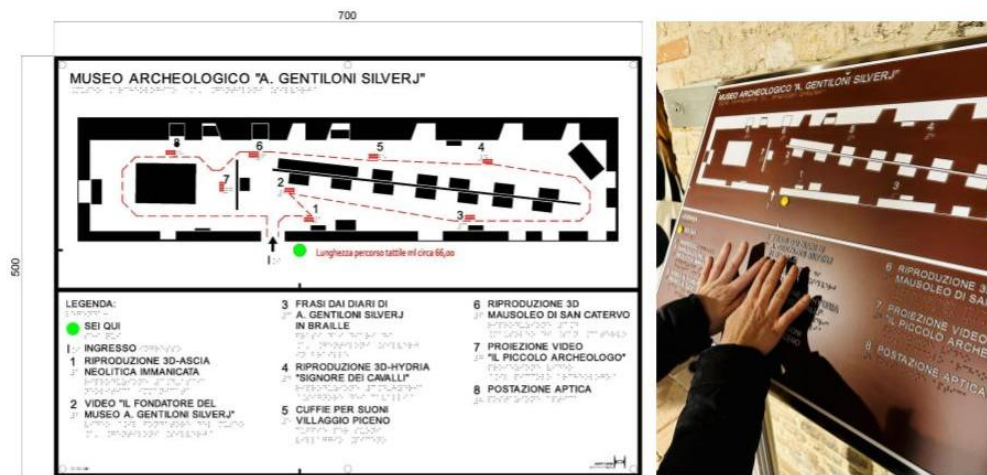


Figure 5 – Planimetric study (left) and tactile map (right) of the exhibition path (picture from case study I)

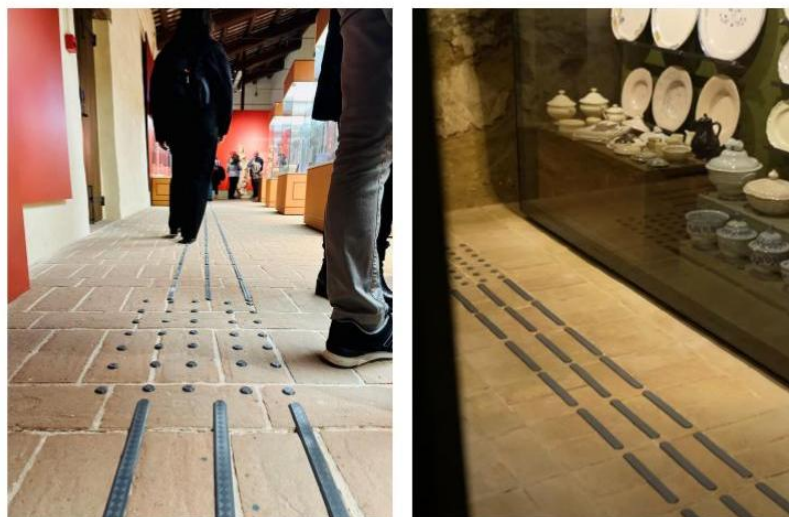


Figure 6 – Tactile horizontal path (left picture from case study I, right picture from case study II)

With reference to the Easy-to-Read path, the research team focused on the definition of a storytelling framework aimed at supporting the museum experiences of all visitors, including those with intellectual disabilities and Autism Spectrum Disorder (ASD). To this end, the storytelling structure of both museums' itinerary was developed collaboratively within a multidisciplinary team, which identified the most significant points of interest and subsequently designed the tools to enhance accessibility and understanding of the cultural contents. To address barriers to cultural accessibility and support comprehension, the team adopted the Easy-to-Read guidelines, which guided the creation of accessible captions, descriptive panels and text/audio information (also embedded in the VM applications). The co-design process, involving people with intellectual disabilities, was supervised by art historians and archaeology experts, who provided guidance for identifying key terminology that could not be altered or omitted without compromising the integrity of the content. The experts established a lexical framework to preserve essential vocabulary, ensuring that the Easy-to-Read resources could promote accessibility while maintaining accuracy and richness in content. This co-design process will be further detailed in the following section. The development of the Easy-to-Read path also focused on addressing issues in perceptual overload and enhancing the visual design of the panels. To this end, during the adaptation process, particular attention was paid to layout, spacing, and hierarchy of information to facilitate immediate readability and reduce fatigue, including the use of a high-legibility font and ensuring an adequate contrast between text and background to enhance readability of printed and digital supports. This integrated approach allowed for the creation of an inclusive narrative structure, combining visual and content accessibility with

scientific rigour, promoting a museum experience that could be both educational and accessible to all. Figure 7 shows a before-and-after comparison of descriptive panels from case study I.



Figure 7 – Before-and-after of informative panels (picture from case study I)

With reference to the AR and VR path, the research group focused on the design and development of XR content aimed at enhancing the inclusivity and engagement of the museum experience. In the case of VR content, the emphasis was placed on creating immersive environments that allow users to experience reconstructed artefacts that cannot be accessed directly, supporting learning within simulated environments. In the case of AR content, the focus was put on enriching visitors' experiences by integrating the physical museum space with digital information consisting in 3D reconstruction of original artefacts on display. As a result, the design and development activity was oriented towards creating adaptive, and user-centred experiences throughout the exhibition path, while promoting a more dynamic, engaging, and accessible approach to cultural heritage fruition (Figure 8).



Figure 8 – XR path (picture from case study II)

As anticipated, the integrated system was operationalised through the study, co-design, and development of technological devices for multimodal interaction. To this end, the research group dedicated its efforts to the development of innovative supports with the overarching goal of offering a comprehensive museum experience for all visitors, including those with disabilities. Specifically, the work focused on integrating different interaction modalities to increase personalisation, interactivity, and accessible storytelling. This effort led to the definition of the concept and user interface for a VM mobile application specifically designed for interaction within museum settings, and a VM desktop application integrated with haptic feedback technology, which were introduced in both case study scenarios. As anticipated, the design and development process, after an initial compliance with UD and UDL requirements related to accessibility standards, followed a participatory approach, giving considerable attention to the requirements, needs and perspectives of people with disabilities, directly involved in focus groups and requirement-definition sessions, ensuring that the development process remained user-centred. In this scenario, the following two sections will delve into the co-design process of the VM

mobile and desktop applications, providing further detail with regards to the development of technology-based solutions within the exhibition paths.

4.2 Co-design of inclusive path through a Virtual Museum mobile application supported by XR technology

As anticipated, the development of technological devices for multimodal interaction with the museum exhibits followed the co-design protocol presented in the previous chapter, which was applied for the co-design and development of a VM mobile application. Building upon the results of the context analysis and user needs assessment, the research team in Special Pedagogy focused on the collaborative design of an interactive system delivered through a mobile application that could allow visitors to access museum information and contents through an intuitive, personalised, and accessible way, while guaranteeing compliance to international standards. In accordance with the co-design protocol presented in the previous chapter, the following procedural steps were followed (6 months in total):

1. *Preliminary prototype creation*: design of the VM mobile application wireframe following UD/UDL standards (1 month);
2. *Co-design*: 1) joint work with art historians and archaeologists in the selection of points of interest and artefacts, as well as the identification of terms that cannot be changed for accuracy and specificity; 2) draft of the Easy-to-Read text and audio contents; 3) collection of feedback from people with disabilities to revise the drafts (3 months);
3. *Reiteration of co-design phases*: crosswise validation (1 month);
4. *Creation of the inclusive museum experience*: integration of the co-designed material in the VM mobile application for the development phase (1 month).

4.2.1 Preliminary prototype creation

The VM mobile app was conceived as an accessible museum guide for all visitors, including those with disabilities. Specifically, the VM mobile application was co-designed to include the following accessibility features:

- Simplified user interface;
- Customisation of settings;
- Accessible content: accessible text storytelling (Easy-to-Read), accessible audio storytelling (Audio Description), XR contents.

The technical development of the VM mobile application was realised in compliance with UD and UDL standards. In the first place, the VM mobile application was designed to be compliant with the accessibility tools already embedded in common smartphones (such as screen zoom, voice assistance, colour inversion, night mode, and brightness/contrast adjustment).

With reference to the VM mobile application dynamic aspects (page structure, information architecture, and user flow), the prototyping activity followed usability principles (ISO 9241-210:2010 standards¹³). Accordingly, a simplified structure and architecture was designed and developed, without redundant textual or visual elements, in order to create a strongly intuitive environment that could guide and support user navigation. In the first place, the VM mobile app allows language selection: upon launch, the default language is Italian, but users can select their preferred language (Italian or English) (Figure 9, left). Secondly, the VM mobile app includes optional personal data collection: users may voluntarily provide personal data to inform the optimisation of the app based on their preferences and behavioural insights (Figure 9, centre-left). Thirdly, the VM mobile app presents an

¹³ www.iso.org

optional tutorial at the beginning of the experience, so that users can choose between being introduced to the VM mobile app or start using it immediately (Figure 9, centre-right). Lastly, the application offers a dedicated screen displaying the museum path and points of interest, offering detailed information on each artefact (Figure 9, right).

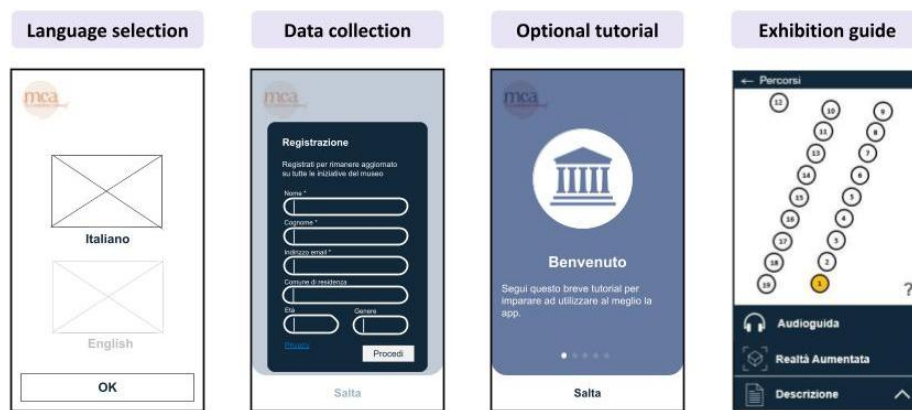


Figure 9 – VM mobile application wireframe (first part)

With reference to the VM mobile application contents, the VM mobile application was designed to offer visitors a structured yet flexible navigation system. Upon accessing the app, after the tutorial, users can choose among the different thematic paths offered by the museum, within which they can select specific points of interest they wish to explore, each corresponding to one or more artefacts housed in the museum's collection (Figure 10, left). Once a path is selected, the application guides the user throughout the entire visit, providing detailed information about each artefact associated with the chosen point of interest. In cases where multiple artefacts are displayed within a single section, the app presents a list from which visitors can select the item they wish to explore, accessing

descriptive content and multimedia materials (Figure 10, centre). For each point of interest, users are offered text information and audio description in Easy-to-Read format, to ensure clarity and comprehension. Moreover, some points of interest incorporate AR experiences, providing interactive and immersive content (Figure 10, right). Additionally, the VM mobile application includes a navigation support system (Figure 11, left), and a QR code reader (Figure 11, right), which further reinforce the connection between the application and the concrete museum exhibition and contexts, enabling users to seamlessly access contextual information, locate artefacts more easily, and engage with interactive multimedia content directly linked to the exhibition displays.

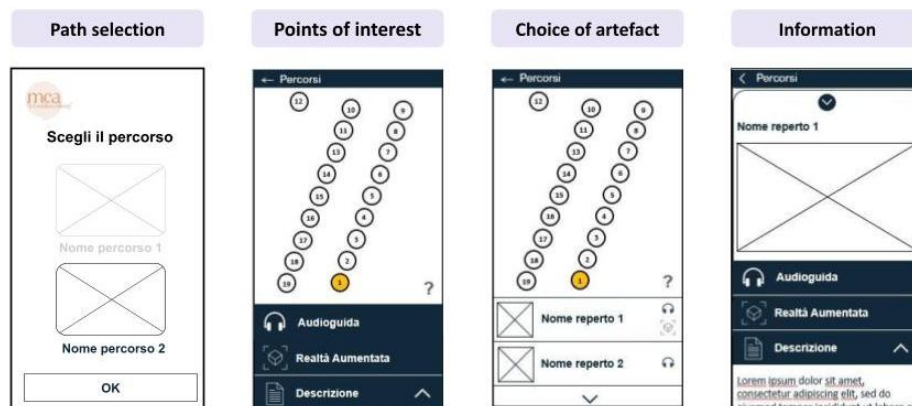


Figure 10 – VM mobile application wireframe (second part)

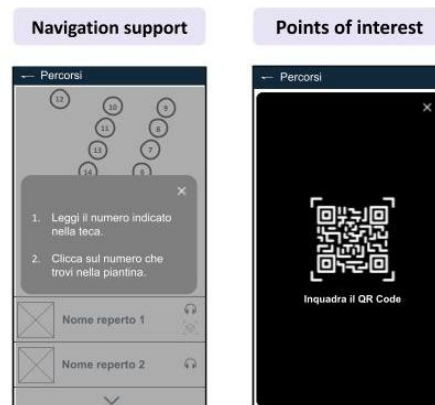


Figure 11 – VM mobile application wireframe (third part)

4.2.2 Co-design, reiterations and creation of the inclusive museum experience

The co-design activities related to the VM mobile application were primarily oriented towards the development of accessible textual and audio materials to be integrated within the digital environment. Firstly, in collaboration with art historians and archeologists, the research team carefully selected pieces of significant historical and educational value, particularly those offering strong narrative, structuring the different points of interest of the museum path. Art historians and archaeologists were also involved in defining essential historical terminology, to ensure contextual integrity and accuracy across the adapted textual and audio contents. Once the key artefacts and terms were identified, the research group in Special Pedagogy proceeded with the drafting of Easy-to-Read material. The drafting of Easy-to-Read materials was conducted through the following procedural phases:

- Reading of the entire text: reading of the original descriptions of artefacts to gain an overall understanding;

- Identification of complex sentences and difficult terms: mapping of critical aspects regarding the cultural accessibility of the original descriptions;
- Reformulation of complex sentences and difficult terms, reorganisation of the information: application of Easy-to-Read guidelines to adapt the original materials;
- Revision: revision of the implemented adaptations alongside possible modifications or additions.

The group took into account several key factors, such as the simplification of vocabulary, the reduction of text and sentence length, the replacement of Roman numerals, complex terminology, abstract expressions, as well as the use of simpler verb forms, in strict adherence to the Easy-to-Read guidelines. Once the draft materials were ready, researchers involved a group of 8 people with intellectual disabilities through a local association for the revision of the Easy-to-Read drafted materials. Through direct collaboration with individuals with intellectual disabilities, researchers were able to adapt the original material increasing its level of accessibility, integrating participants' feedback and suggestions on how to further rephrase and reformulate the materials. The revision process also allowed for a reorganisation of the information, creating a more coherent and logical structure. The revised texts underwent a re-testing phase, in which the adapted materials were reviewed by a control group of 5 people with intellectual disabilities and 5 people without disabilities. According to their feedback, further refinements and additions were implemented. Lastly, the materials were revised by a group of 3 people with visual disabilities to check that the audio version of the texts would be compliant to AD guidelines.

The testing sessions also revealed the need to create a glossary to collect and clarify the meaning of specific terms that could not be edited for historical and

disciplinary accuracy, as their omission would have compromised the overall meaning of the communicative framework, lowering the cultural and educational value of the museum exhibit. Following participants' feedback, several glossary entries were enriched with visual supports, including images that illustrate the meaning of each term. Additionally, photographs were integrated within the informational panels to visually complement and clarify the written text, enriching accessibility and understanding of all visitors. Lastly, the materials were submitted to museum experts for validation and final approval before being integrated within the VM mobile application. The whole co-design process, which extended over a period of six months, was conducted remotely through the continuous exchange of materials and feedback via digital communication channels.

Table 1 illustrates the main phases involved in the Easy-to-Read adaptation of a museum caption from case study I, comparing the original text, the first draft produced by the research team, and the final version refined through co-design activities, incorporating participants' feedback.

Table 1 – Easy-to-Read co-design process

Original text	Easy-to-Read draft
Il Museo Civico Archeologico "Aristide Gentiloni Silverj" e il suo fondatore Il Museo Civico Archeologico di Tolentino venne fondato il 30 settembre del 1882 per volontà del Conte Aristide Gentiloni Silverj (Arsoli 15/h/1844 - Tolentino 28/h/1937) che ne fu Direttore fino alla scomparsa. Conserva, principalmente, i corredi tombali rinvenuti nelle necropoli picene di Tolentino, oggetto di scavo da parte dello studioso a partire dal 1879, assieme ad alcuni pezzi della sua collezione privata, donazioni e successive acquisizioni. Nel corso della sua vita Gentiloni Silverj ricevette diversi riconoscimenti, ebbe rapporti di stima e amicizia con alcuni tra i più importanti studiosi dell'epoca e divenne un punto di riferimento del panorama culturale storico-archeologico nel territorio marchigiano. L'attuale collezione è suddivisa in due principali sezioni. A destra, dopo un'introduzione sulle fasi preistoriche, si trova la parte della raccolta relativa alle necropoli picene; a sinistra è proposto invece un percorso sulla Tolentino romana e medievale, attraverso l'esposizione di alcuni reperti di età imperiale e di una collezione di epigrafi. Dalla sua fondazione il Museo è stato oggetto di numerosi interventi e riallestimenti. L'ultimo dei quali, a cura di Agnese Massi Secondari, è stato affiancato da un meticoloso studio delle testimonianze scritte lasciate dal Conte, comprendenti atti amministrativi, carteggi, diari di scavo e cataloghi, conservati presso l'Archivio del Museo e la Biblioteca Filefica di Tolentino e in parte esposti nel percorso museale. L'attuale riallestimento completa quello precedente, integrandolo con illustrazioni didattiche e pannelli didascalici. In definitiva, il Museo, ripercorrendo la storia del territorio di Tolentino, dalla preistoria all'età Medievale, fornisce anche un quadro sul legame tra i reperti esposti e la storia del loro rinvenimento, aprendo, attraverso i disegni e le pagine del Gentiloni Silverj, una finestra sulla storia dell'archeologia e dei suoi metodi.	Museo civico archeologico di Tolentino – Pannello 0 Il museo è nato nel 1882. Il creatore del museo si chiama Aristide Gentiloni Silverj (il museo è stato creato da ...). La foto a fianco è di Aristide Gentiloni Silverj. Il suo lavoro era l'archeologo. L'archeologo è un uomo, o una donna, che scava per trovare oggetti antichi. Aristide Gentiloni Silverj ha trovato tanti oggetti antichi e li ha conservati nel museo che stiamo visitando. Questi oggetti molto antichi sono le cose che i parenti mettevano nella tomba del defunto. Aristide Gentiloni Silverj ha trovato tante tombe antiche nella città di Tolentino. Un luogo dove ci sono tante tombe si chiama necropoli. Tutte queste tombe erano di un popolo che si chiamava Piceni. Il popolo dei Piceni è vissuto tanti anni fa, molto prima della nascita di Gesù Cristo, in un periodo storico chiamato età del ferro. I Piceni sono il popolo che hanno fondato la città di Tolentino. In un'altra stanza del museo troviamo oggetti che appartenevano ai Romani. I Romani sono arrivati a Tolentino dopo i Piceni. I Romani erano un popolo vissuto nel periodo in cui nasceva Gesù Cristo. Aristide Gentiloni Silverj ha trovato tante cose che appartenevano ai Romani e le ha messe in questo museo. Nel museo troviamo documenti e immagini che raccontano come Aristide Gentiloni Silverj ha trovato questi oggetti. Guardando gli oggetti che stanno in questo museo possiamo immaginare come vivevano tanti anni fa i Piceni e i Romani. Dopo la morte di Aristide Gentiloni Silverj altre persone si sono occupate del museo.

Final version
Museo civico archeologico di Tolentino – Pannello 0 Il museo è nato nel 1882. Il museo è stato creato da Aristide Gentiloni Silverj. Aristide Gentiloni Silverj era un nobile molto famoso di Tolentino. La foto a fianco è di Aristide Gentiloni Silverj. Il suo lavoro era l'archeologo. L'archeologo è un uomo, o una donna, che scava per trovare oggetti antichi, cioè del passato. Grazie agli oggetti antichi l'archeologo ricostruisce la storia dei popoli antichi. Aristide Gentiloni Silverj aveva trovato tanti oggetti antichi e li ha conservati ed esposti nel museo che stiamo visitando. Questi oggetti molto antichi erano le cose che i parenti mettevano nella tomba del defunto, ovvero sono il corredo funebre. Aristide Gentiloni Silverj ha trovato tante tombe antiche nella città di Tolentino. Un luogo dove ci sono tante tombe si chiama necropoli. Tutte queste tombe erano di un popolo che si chiamava Piceni. Il popolo dei Piceni era vissuto tanti anni fa, molto prima della nascita di Gesù Cristo. I Piceni erano il popolo che viveva tanti anni fa nel territorio dove oggi c'è la città di Tolentino. Nel museo troviamo anche oggetti che appartenevano ai Romani. I Romani avevano mandato via i Piceni e dopo hanno fondato Tolentino. I Romani erano un popolo vissuto nel periodo in cui nasceva Gesù Cristo. Aristide Gentiloni Silverj aveva trovato tante cose che appartenevano ai Romani e le ha messe in questo museo. Nel museo troviamo documenti e immagini che raccontano come Aristide Gentiloni Silverj aveva trovato questi oggetti. Guardando gli oggetti che stanno in questo museo possiamo immaginare come vivevano tanti anni fa i Piceni e i Romani. Dopo la morte di Aristide Gentiloni Silverj altre persone si sono occupate del museo.

Once the content was validated by the museum professionals, the VM mobile applications were fully developed and completed. Figure 12 presents the final VM mobile application for the museum exhibit of case study I, while Figure 13 presents the final VM mobile application for the museum exhibit of case study II. Both applications can be accessed through personal devices (e.g., smartphones), or via tablets provided by both museums.

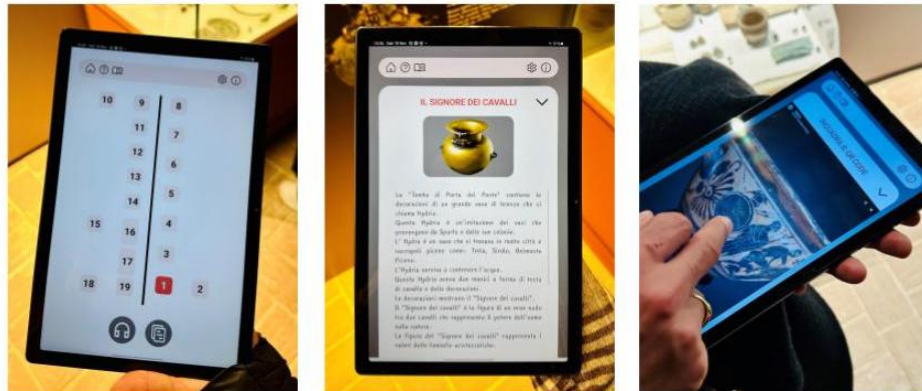


Figure 12 – Final VM mobile application final results (case study I)

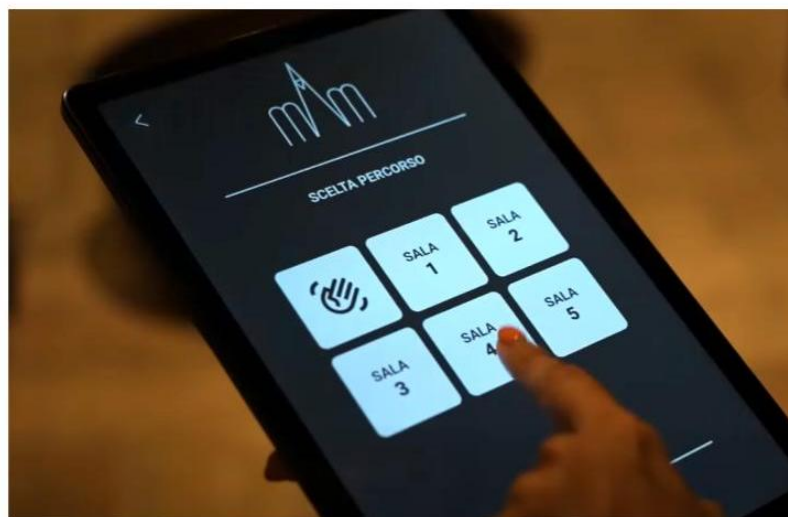


Figure 13 – Final VM mobile application final results (case study II)

4.3 Co-design of inclusive path through a Virtual Museum desktop application supported by haptic technology

The co-design protocol presented in the previous chapter was also applied for the co-design and development of a VM desktop application, interpreted as another

device to allow multimodal interaction within the museum experience. Similar to the mobile application, the VM desktop application was co-designed as a response to the insights emerging from the initial focus groups related to museum context analysis. Specifically, the VM desktop application co-design and development aimed at creating an immersive and sensory-enriched experience with the exhibited artefacts through the integration of haptic technology, offering tactile interaction with virtual, high-fidelity reproductions of the exhibitions' artefacts. In compliance with the co-design protocol presented in the previous chapter, the following procedural steps were followed:

1. *Preliminary prototype creation*: VM desktop application preliminary prototype development following UD/UDL standards (1 month);
2. *Co-design*: collection of feedback on specific accessibility needs and redesign (2 months);
3. *Reiteration of co-design phases*: testing, concept optimisation, and refinement (2 months);
4. *Creation of the inclusive museum experience*: creation of the final VM desktop application integrating the co-designed solutions for the development phase (1 month).

Considering that the desktop application with haptic feedback represents an experimental solution, the co-design process primarily focused on its functional and interactional components, such as the interaction modalities to enhance perception and understanding of cultural exhibits. As for its contents, the VM desktop app embedded the XR path presented above, as well as the co-designed Easy-to-Read materials developed for the VM mobile application.

4.3.1 Preliminary prototype creation

The preliminary prototype creation consisted in the creation of a VM application similar to that described in Ceccacci et al. (2022), consisting in a VM interface that presents 3D virtual reproductions of cultural artefacts belonging to the museum exhibits, integrated by a high fidelity force feedback haptic device (specifically, the Geomagic Touch X di 3D system¹⁴). The preliminary prototype allows users to interact with a 3D virtual object by using a virtual probe (which is depicted on the screen through the image of a stylus) synchronised with the haptic device handpiece (Figure 14). Specifically, when the virtual probe comes into contact with the virtual object, the haptic device provides a force feedback to the user, simulating the sensation of colliding with the virtual object and perceiving both its surface and the resistance of its material, following the action-reaction principle. By pressing a button on the handpiece, the user can manipulate the virtual object (e.g., moving and rotating it in the three axes). The design of the specific user interface was not carried out at this stage to guide its process based on the results of the first co-design iteration, through an accessibility-by-design approach. Consequently, the preliminary prototype did not include a structured main menu or fully defined interface elements, as this phase focused on testing the core interaction dynamics between user and virtual objects, as well as assessing the usability and accessibility of the haptic feedback system. Accordingly, the decision to postpone the detailed interface design allowed the research team to gather empirical insights to inform its development.

¹⁴ www.3dsystems.com



Figure 14 – Haptic device used for the co-design activities

4.3.2 Co-design, reiterations and creation of the inclusive museum experience

The first co-design iteration aimed at identifying and understanding specific user needs with reference to basic accessibility requirements to be met in the VM desktop application development, and took place within one day. To this end, a group of 5 participants with visual disabilities was involved in two specific activities:

- Activity #1: training on how to use the VM desktop application and free interaction with it for 10-12 minutes;
- Activity #2: conduction of a focus group (Liamputtong, 2011) to assess participants' experiences and insights on the VM desktop application and haptic device.

The questions used to guide the focus group are the following:

- GQ1: *What are your impressions on haptic technology's ability to support the conceptualisation of virtual objects within the VM application?*

- GQ2: *What are the challenges and limitations you experienced in using haptic technology to interact with virtual objects within the VM application?*
- GQ3: *What would you suggest to optimise the VM application integrated by the haptic device? Do you have any preferences related to controls used to interact with the VM interface?*

The insights emerging from the first focus were analysed through Qualitative Content Analysis (Schreier, 2012) and revealed several key insights for the co-design process (Figure 15). Despite participants' limited familiarity with haptic technology and overall intermediate level of digital competences, a general high level of interest and engagement was recorded, although some participants encountered difficulties in conceptualising the shape of virtual objects within the VM desktop application. However, the analysis also highlighted limitations: as the application turned out to be particularly effective for people with low vision, people with total blindness found the prototype to be more challenging to use and less supportive, underscoring the importance of addressing their specific accessibility needs. An additional theme that emerged concerned the insufficiency of haptic feedback alone to support object localisation and interaction, especially for users with total blindness. Accordingly, participants suggested integrating an acoustic mapping system to aid navigation and object detection within the virtual space. Regarding the interface design, participants also proposed the introduction of alternative navigation modes, such as keyboard-based commands, which were considered to be more familiar and reliable for navigating the application.



Figure 15 – Insights from the first testing session

The requirements and suggestions that emerged during the first co-design iteration directly informed the design of the VM desktop application, guiding the creation of a solution that could meet the specific needs and preferences expressed by participants. Accordingly, as suggested by participants, the design incorporated an acoustic mapping system to facilitate orientation and interaction within the virtual environment. Once activated, the system emits a high-pitched sound with a modulated frequency that varies according to the distance between the virtual probe and the object: the sound becomes higher when the probe is distant, and lower as it approaches the object, stopping completely when the probe makes contact with the object. The acoustic mapping system allows users to navigate and locate virtual artefacts more effectively.

The interface design of the VM application was developed in accordance with the W3C Accessibility Requirements for People with Low Vision¹⁵ and the Web Content Accessibility Guidelines (WCAG) 2.2, ensuring complete operability through both mouse and keyboard inputs, following participants' suggestions. Furthermore, a screen reader was integrated to support users in navigating the

¹⁵ www.w3.org/TR/low-vision-needs/

application's various functions. The redesigned VM desktop application features a main menu that allows users to navigate the application, select the preferred language (Italian or English), explore four 3D virtual artefacts, and exit the application (Figure 16). Upon selecting one of the four artefacts, users are directed to a dedicated page that displays (Figure 17):

- The 3D virtual object corresponding to the selected artefact, which can be manipulated through the haptic device;
- A textual description of the artefact in Easy-to-Read language;
- A text-to-speech function allowing users to listen to the audio description (enabled by default);
- A reset button to return the object to its initial position after being moved and manipulated;
- A toggle button to activate or deactivate the acoustic mapping system (enabled by default);
- A navigation button to return to the Main Menu.



Figure 16 – VM desktop application main menu design



Figure 17 – VM desktop application artefact page design

The second co-design iteration involved a different group of participants consisting of 5 people with visual disabilities to avoid familiarisation bias and took place within one day. The specific activities conducted are the following:

- Activity #1: training on how to use the VM desktop application and free interaction with it for 10-12 minutes;
- Activity #2: achievement of five specific tasks required by the researcher in the use of the VM application (change language; find and select an artefact from the main menu; manipulate the virtual artefact using the haptic device; activate audio description of the object; go back to the main menu);
- Activity #3: administration of the System Usability Scale (Brooke, 1996; 2013) and conduction of a focus group (Liamputtong, 2011) to collect new insights and feedback.

The guiding questions for the focus group are the same used for the first co-design iteration. Similarly to the first co-design iteration, the insights emerging

from the focus were analysed through Qualitative Content Analysis (Schreier, 2012).

Regarding the results obtained through the administration of the SUS, the average usability score obtained across all participants was 75 out of 100, suggesting how, overall, the system could be regarded as user-friendly and functionally effective, supporting users in completing the intended tasks despite individual differences in technological experience. With reference to the observation shared during the focus group, participants highlighted that interaction with virtual objects could be further optimised through the integration of a virtual assistant capable of providing real-time descriptions during the exploration of the virtual objects, supporting a clearer conceptualisation of the artefacts as it offers navigation cues. This feedback underscored the importance of incorporating a voice-guided system to enhance user experience, leading to a more autonomous experience.

To implement the virtual assistance solution co-designed with participants, the research team employed the Wizard of Oz prototyping technique (Helgert et al., 2024), which involves one participant or researcher simulating the role of the voice assistant, reproducing its expected functionalities in real time. By doing so, the team could test interaction dynamics and gather user feedback without the need to fully develop a functional technological system at this stage.

A final evaluation was conducted with a third group of 8 participants with visual disabilities, and 8 participants without visual disabilities. At this stage of development, the involvement of participants without disabilities could allow a final validation and the possible detection of differences in terms of accessibility and usability of the developed VM desktop application. The co-design iteration took place in one day, and consisted in the following activities:

- Activity #1: training on how to use the VM desktop application and free interaction with it for 10-12 minutes;
- Activity #2: achievement of five specific tasks required by the researcher in the use of the VM application (change language; find and select an artefact from the main menu; manipulate the virtual artefact using the haptic device; activate audio description of the object; go back to the main menu), supported by the vocal assistant simulated by a researcher;
- Activity #3: administration of the System Usability Scale (Brooke, 1996; 2013), questionnaire on user experience based on Pine & Gilmore (2011) (Ceccacci et al., 2021) and conduction of a focus group (Liamputtong, 2011) to collect new insights and feedback.

The guiding questions and data analysis methods regarding the insights collected through the focus group are the same as the previous two co-design iterations.

In relation to the results obtained through the SUS administration, there were no significant differences between people with visual disabilities (average score of 77 out of 100) and those without visual disabilities (average score of 79 out of 100). With reference to the user experience questionnaire based on Pine & Gilmore (2011), the group of participants with visual disabilities assigned the highest average score to the education dimension ($M = 6,06$), while the average lowest score was assigned to the entertainment dimension ($M = 2,81$). With reference to participants without disabilities, the highest average score to the dimension of education ($M = 2,81$), and the lowest to the dimension of aesthetics ($M = 1,77$), assigning lower scores overall. Figure 18 compares the results obtained for each dimension between participants with visual disabilities (black bars) and participants without visual disabilities (grey bars).

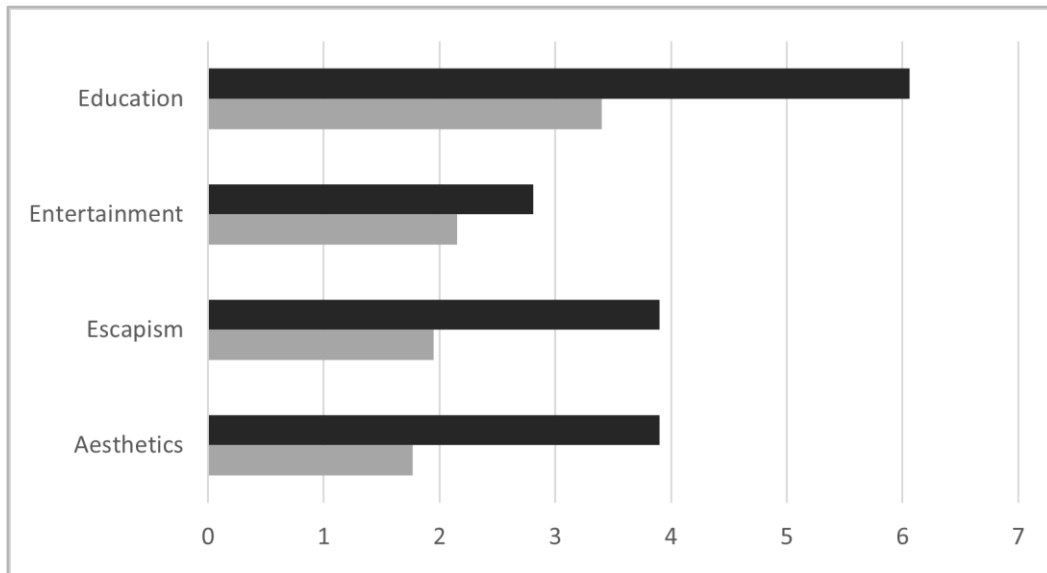


Figure 18 – User experience questionnaire results

The focus group results allowed us to confirm how the provision of navigation cues and descriptions through voice guidance, whether digital or provided by a person, represents a central resource to enhance the VM desktop application experience. In particular, participants emphasised that the presence of an auditory guide supported both the conceptualisation and the interaction with the virtual artefacts, thereby promoting a deeper understanding of the information associated with each piece, which explains how they assigned the highest average score to the education dimension on the user experience questionnaire. Overall, in line with the quantitative results obtained from the administered questionnaires, participants expressed a high level of satisfaction regarding the quality of the experience, as many reported that the activity provided an unprecedented opportunity for learning and engagement with museum content. Accordingly, all participants recognised this experimental technology as a promising tool for people with and without disabilities.

After this final iteration, the VM desktop application was considered ready to be fully developed and integrated within both museums. Figure 19 presents the final

VM desktop application for the museum exhibit of case study I, while Figure 20 presents the final VM desktop application for the museum exhibit of case study II. In both cases, the VM desktop application was integrated to a dedicated station along the museum exhibit path.

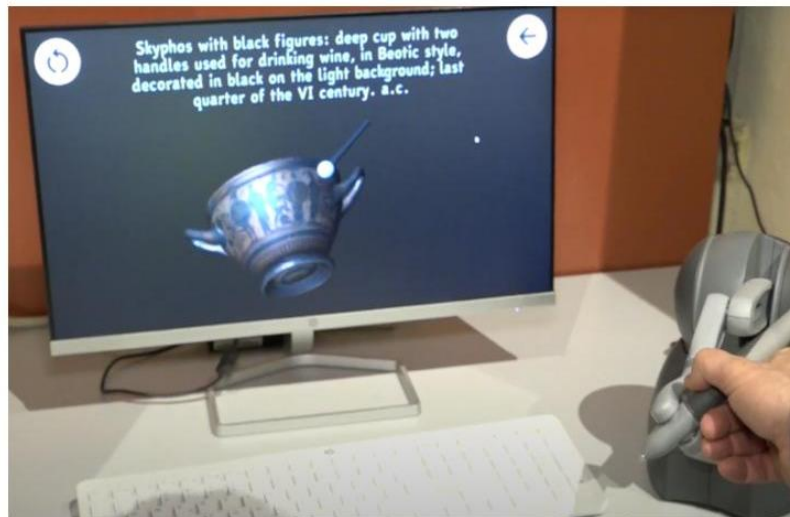


Figure 19 – Final VM desktop application final results (case study I)

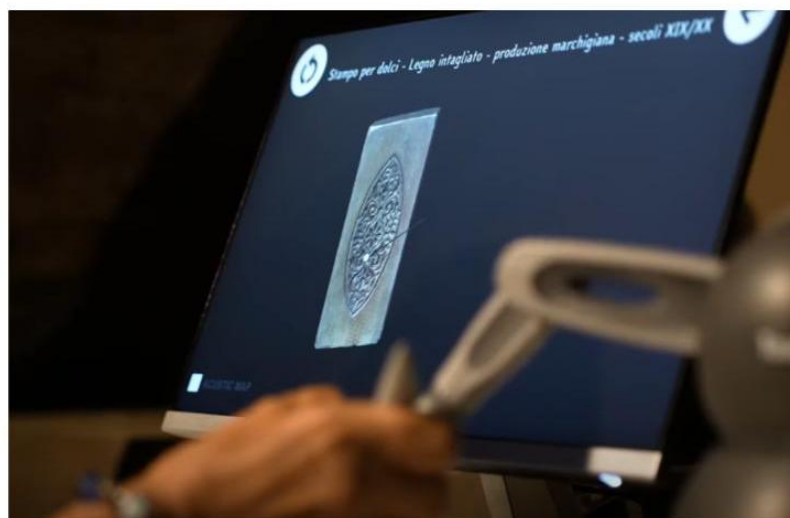


Figure 20 – Final VM desktop application final results (case study II)

5. Museum staff training

Alongside the co-design and development of inclusive, integrated solutions (phases #2 and #3), following the objectives of the projects, the research group in Special Pedagogy delivered a training path for the staff of both museums, aimed at increasing their knowledge and competencies with reference to accessibility and XR technologies application for inclusive cultural heritage fruition.

The training activities delivered as part of the projects pursued several key objectives to strengthen museum staff's know-how in accessibility and inclusion practices. Specifically, the training path sought to:

- Introduce the concept of accessibility, highlighting its educational, cultural and social relevance, as well as its operational trajectories (Module 1);
- Provide practical guidelines for welcoming visitors with disabilities and facilitate inclusive and meaningful museum experiences (Module 2);
- Offer technical instruction on the VM mobile application and VM desktop application, with particular reference to the functioning and maintenance of the haptic device workstation, complemented by hands-on exercises to consolidate practical skills (Module 3).

In order to achieve these objectives, the research group in Special Pedagogy conducted a mapping activity aimed at identifying the most relevant theoretical concepts and operational resources to be shared with museum personnel. The mapping activity led to the identification of the core concepts of the training path, which were organised into three main modules. Figure 21 provides an overview of the training path modules, including the specific topics covered in each module.



Figure 21 – Museum staff training path

Further into detail, Module 1 illustrates the concept of accessibility, providing museum staff with an overview on how this dimension can be conceptualised for the promotion of active participation and social inclusion. After presenting accessibility as a right and pedagogical principles, the Module provides examples of both physical and cultural accessibility issues applied to museum contexts. The module presents the conceptual framework of the bio-psycho-social approach to disability to familiarise museum staff with the concepts of facilitator and barrier in relation to accessibility. Lastly, the Module offers insights regarding the main operational principles related to Universal Design and Universal Design for Learning.

Secondly, Module 2 illustrates the specific resources, strategies, and solutions that can be implemented to support visitors with disabilities within museum contexts. The Module provides essential information regarding physical, sensory, and intellectual disabilities to support museum staff in understanding visitors with disabilities' specific accessibility needs, as well as the most effective approaches to address them. In addition, the Module explores practical measures for improving

accessibility and creating a welcoming and inclusive museum environment, with particular reference to the promotion of meaningful learning experiences.

The third and last Module focuses on the technical and operational aspects related to the integrated system for museum accessibility that was introduced in both museum exhibits after the co-design and development phases. In this regard, the Module introduces both the VM mobile application and the VM desktop application, presenting their structure and functions. To ensure that participants to the training path could gain operational autonomy in managing the implemented technologies, possessing the necessary competencies to support visitors while using these innovative devices, the Module also included a hands-on training activity that trained them in the use of the applications and the haptic device specifically. This practical part also included calibration procedures, basic troubleshooting, and safety measures to ensure the correct maintenance of the technologies.

The training path was delivered in person, supported by a PowerPoint presentation, with the personnel of each museum separately, and was structured around two hours of frontal instruction (Module 1, 2, and first part of Module 3) followed by one hour of practical training dedicated to the operation of the VM mobile application and the VM desktop application (second part of Module 3). All didactic materials used in the training path—primarily PowerPoint presentations and additional web resources—were made available to the museum staff at the end of the training. This ensured the sustainability of the learning outcomes and allowed personnel to revisit and apply the acquired knowledge in daily museum activities.

Overall, the training contributed to enhancing the museum's institutional capacity to promote accessibility as an integral dimension of its cultural and educational mission. By offering both theoretical and practical perspectives, the training path equipped museum professionals with the knowledge and skills required to create a welcoming and inclusive museum environment, allowing them

to leverage the newly introduced accessibility solutions with awareness and competence.

6. Final evaluation

As presented in the previous chapter, phase #5 (Final evaluation) consisted in a validation of the newly redesigned museum exhibition paths, which would then include the integrated system presented earlier. To this end, a group of people with and without disabilities took part in a final visit to both museums, in order to assess the effectiveness and accessibility of the implemented solutions and allow researchers to gather insights on participants' perspectives and feedback for further trajectories in the development of inclusive museum experiences. Specifically, a total of 12 participants took part in the final visit to both museums, 4 of which had already taken part in phase #1 (Museum context analysis) and 3 of which had already taken part in phase #2 (Co-design of integrated solutions).

Data collection took place following both visits, and consisted in the administration of the user experience questionnaire based on Pine & Gilmore (2011) in relation to the overall museum path, and the conduction of a focus group. Both activities were conducted in person. The combination of both a quantitative and qualitative measure in this final phase was adopted to ensure a comprehensive and multidimensional evaluation of the redesigned museum experiences, in line with the co-design and mixed methods research framework. Specifically, quantitative data collected through the user experience questionnaire could provide measurable insights into the balance between engagement, education, aesthetics, and escapism related aspects of the visit. Complementarily, qualitative data gathered through the focus group could expand on the quantitative results, enabling

an in-depth, collective exploration of participants' perceptions, emotions, and feedback on the newly redesigned museum exhibition paths, contextualising and enriching quantitative data through the integration of a more direct narration of their lived experiences. Data collected from the focus group was analysed through Qualitative Content Analysis (Schreier, 2012), as for the other focus groups conducted within the research.

With reference to the user experience questionnaire, the aggregated analysis of the scores assigned to each of the four dimensions identified by Pine & Gilmore (2011) (Figure 22) revealed that, following the redesign of the museum exhibition paths, the dimensions most prominently perceived by participants in case study I are related to education ($M = 6,58$) and entertainment ($M = 6,5$), followed by aesthetics ($M = 5,17$), while escapism emerged as the least prominent ($M = 3,33$). In relation to case study II, the scores appear to be interestingly similar, with the most prominent dimensions being education ($M = 6,42$) and entertainment ($M = 6,33$), followed by aesthetics ($M = 5,75$) and escapism ($M = 4,25$).

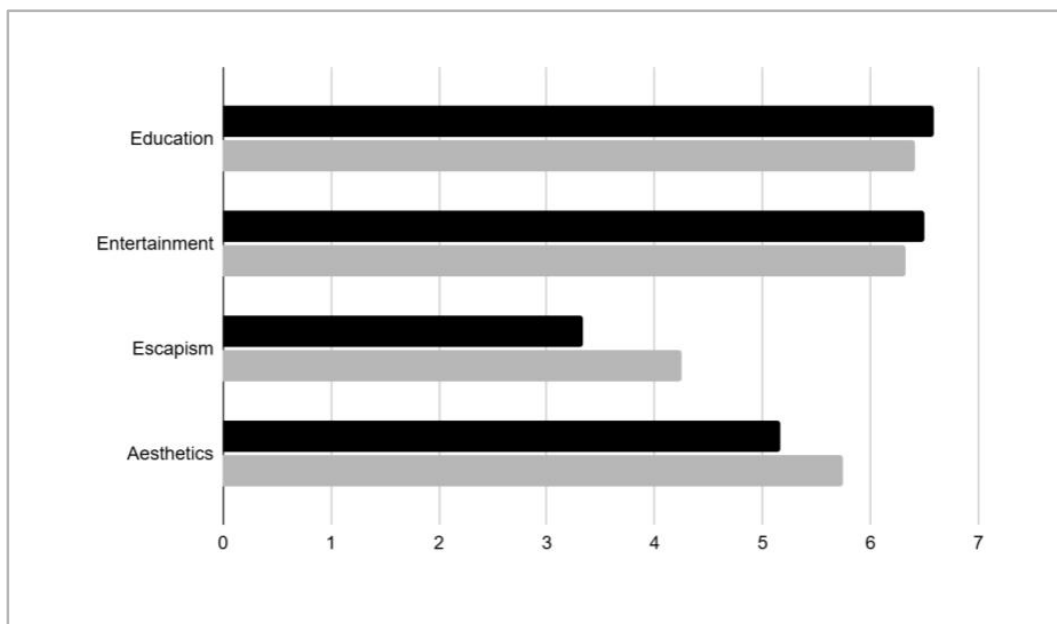


Figure 22 – User experience questionnaire results

These findings appear to indicate that the redesigned museum experiences were particularly effective in combining learning opportunities with engaging and enjoyable experiences. Particularly, the scores obtained for both case studies appear to confirm how the integrated solutions can balance the provision of effective learning opportunities with the promotion of engaging experiences, supporting active participation and engagement with cultural heritage. The aesthetic dimension, though slightly less dominant, was also positively evaluated, scoring higher in case study II. This result could be linked to the nature of the Museum of Monastic Arts, which, as presented, is strongly dedicated to the recreation of the life and habits of Poor Clares from an evocative point of view. Conversely, the relatively low perception of escapism can be attributed to the technological features of the integrated solutions, which—while interactive and rich in contents—maintain a strong connection to the real museum environment rather than offering a fully immersive experience. Overall, data collection through the user experience questionnaire shows promising results regarding the implemented integrated solutions, showing how the co-designed interventions fostered meaningful, engaging, and effective museum experiences.

The qualitative data collected during the final focus group provided rich insights into participants' experiences with the two redesigned museum paths and the newly implemented integrated solutions, as summarised by Figure 23.



In the first place, all participants, both with and without disabilities, unanimously recognised the positive impact of the inclusive strategies adopted. The integration of multiple supports to engage with the cultural content (tactile supports, Easy-to-Read supports, XR supports) fostered a greater sense of engagement and participation according to them. Participants who took part in the museum context analyses recognised how, this time, they could experience a more meaningful and culturally enriching visit, while participants who took part in the co-design sessions were satisfied with the development of the final solution they contributed to ideate. Participants who did not take part in the earlier research phases appeared to be equally satisfied with the experience, expressing how the redesigned paths offered them the opportunity to connect with local cultural heritage through a more interactive way.

Secondly, participants appreciated the possibility of engaging with cultural heritage according to their preferences and interests, underlining how the personalisation offered by the integrated systems offers novel opportunities for museum experiences, both enjoyable and educational. In this sense, participants

emphasised how the provision of multiple means through which they could access the museum contents represented a central resource for the meaningfulness of the museum visit. In this regard, they also noted how these kinds of solutions could provide benefits for all people, especially groups of children and youth who might be visiting the museums with their school, as the developed solutions can respond to different learning styles while supporting a comprehensive and global experience of the museum environment.

A third key finding concerned participants' appreciation of XR and haptic technologies, which were considered by most of the participants as relevant supports to explore and interact with cultural artefacts in greater depth than would have been possible through traditional means. Participants noted how the implemented solutions allowed them to understand the innovative potential and impact of innovative technology, even among those with limited familiarity with digital tools. In particular, older participants and those with lower digital literacy reported how they felt empowered by the opportunity to interact with cultural artefacts through the two applications, as they were easier to use than traditional technological supports they encounter in their everyday life.

Lastly, the contribution of the trained museum staff emerged as a crucial factor in supporting accessibility and engagement. In particular, participants highlighted how the presence of knowledgeable and competent personnel greatly enhanced their ability to use the new technological supports, making them feel comfortable and supported throughout the whole visit. The staff's role was recognised as a useful resource for ensuring that all visitors could navigate the redesigned exhibition paths autonomously and meaningfully. However, a few participants affirmed that they still preferred conducting the visit independently, without relying on their specific support.

Overall, the findings from phase #5 appear to confirm that the redesigned museum environments successfully offered opportunities for active participation and social inclusion, enabling visitors with and without disabilities to engage actively and meaningfully with the cultural heritage they offer, offering a stimulating, informative, and satisfying experience and reshaping traditional museum practices towards more inclusive and participatory experiences. The implementation of an iterative co-design process, in this regard, made it possible to integrate the proposed solutions with interventions and strategies aimed at increasing accessibility and user-friendliness.

7. A protocol for inclusive leisure: critical reflections

The proposed research, grounded in two case studies related to museum accessibility, aimed at investigating the most suitable solutions to promote inclusive leisure, recalling its value for Quality of Life within the wider framework of the Life Project (Felce & Perry, 1995; WHO, 1995; Iso-Ahola & Park, 1996; Cummins, 1997a; MacNeil & Anderson, 1999; Schalock & Verdugo Alonso, 2002; Badia et al., 2013a, 2013b; Giaconi, 2015; Del Bianco, 2019; Tokarski & Zarotis, 2020; WLO, 2020), and confirming the conceptualisation of cultural life participation as a central resource for individual and collective wellbeing.

The integration of XR and haptic technology in museum paths—when informed by Special Pedagogy epistemological frameworks and co-design approaches—can promote more inclusive and engaging experiences for all visitors. These solutions, indeed, not only support people with disabilities in navigating and interacting more effectively with museum artefacts, but also provide alternative engagement opportunities for everyone, suggesting how the proposed solutions could represent

a permanent component of multiple museum exhibitions, beyond the two case studies proposed. Within the framework of new museology, XR and haptic technology emerged as a powerful resource for advancing accessibility, participation and learning in cultural contexts. As evidenced by this research, navigating the transformative potential of emerging technologies in cultural contexts requires a pedagogical reflection on the social and educational role of museums and leisure contexts in general, emphasising their contribution to the Quality of Life of individuals and communities (Schalock & Verdugo Alonso, 2002; Giaconi, 2015; Giaconi & Del Bianco, 2025). The findings underscore the importance of combining the expertise of specialists in Special Pedagogy, museum stakeholders, and people with disabilities to foster inclusive trajectories that can also encompass the technological development of museums and, more generally, leisure contexts. Accessibility, therefore, should not be reduced to compliance with predefined standards but envisioned as a dynamic, contextual, and participatory process aimed at developing meaningful solutions for all. The active interest and engagement of participants, in this sense, puts forth museums' responsibility in promoting a sense of collective identity by providing equal opportunities in accessing cultural heritage, creating meaningful relationships with local communities and promoting territorial networks (ICOM, 2022).

Specifically, the proposed research highlights how the proposed co-design protocol represents a promising avenue for enhancing the accessibility of museum environments, offering a transferable procedure to promote inclusive process in other leisure contexts. The results that were obtained through the co-design protocol appear to contribute to the development of a new paradigm for leisure and cultural participation, enhancing participatory trajectories and inclusive training as vital trajectories to fully realise the potential of museums to function as spaces for social innovation and community building (Del Bianco et al., 2024; Giaconi & Del

Bianco, 2025). Emphasising reciprocity, collaboration, and shared responsibility among stakeholders represents a vital trajectory for transforming leisure contexts into spaces of research, empowerment, and social innovation, also maximising the potential of technology to promote equitable participation and inclusion (UN, 2006; Giaconi et al., 2024a; Giaconi & Del Bianco, 2025). Accordingly, these trajectories can support the promotion of a culture of inclusive leisure, ensuring that free time pursuits can be accessible, enjoyable, and enriching for everyone (Giaconi & Del Bianco, 2025).

The adopted co-design protocol, drawing from the epistemological frameworks of Special Pedagogy research, proved to be an effective methodological framework for guiding the development of inclusive leisure contexts. By bridging context analysis, participatory methodologies, and staff training, it enabled a dynamic and iterative process that brought together researchers, people with disabilities, experts and museum personnel for the promotion of a shared vision regarding the connection between accessibility, inclusion, cultural life participation and Quality of Life (Giaconi & Del Bianco, 2025). This approach did not only ensure that the resulting solutions were grounded in real user needs and experiences, but also fostered a shared sense of ownership and collective learning among all stakeholders.

In this direction, the protocol allows the operationalisation of the trajectories highlighted in chapter 4, related to the promotion of leisure in the Life Project (Figure 1). By focusing on increasing the level of accessibility of the designated leisure context, the protocol provided the means through which active participation of all museum visitors, including those with disabilities, could be fostered. In this sense, the protocol sustains the need to promote authentic and meaningful leisure experiences, in line with the recommendations of scientific literature (Felce & Perry, 1995; Felce, 1997; Giaconi, 2015; Marques et al., 2021; Haythorne et al., 2022; Giaconi & Del Bianco, 2025). Furthermore, given its participatory nature, the

protocol allowed the identification of people with disabilities' unique leisure interests and needs. The acknowledgement of participants' different experiences and perspectives, reflected in the provision of multiple means to engage with the museum context, allowed researchers to commit to the need of ensuring that leisure experiences are aligned with personal inclinations, needs, and interest, also in light of self-determination needs (Rogers et al., 1998; Badia et al., 2011a; Shogren, 2013; Armila et al., 2017; Del Bianco, 2019). The participatory stance, additionally, allowed to recognise how leisure contexts can represent sources of meaning in people's lives across their life (Montobbio & Lepri, 2000; Labbé et al., 2019; Caldin & Giaconi, 2021; Iso-Ahola & Baumeister, 2023), valuing their potential to foster personal development and wellbeing through the provision of opportunities for learning, cultural engagement and social cohesion (Giaconi & Del Bianco, 2025). Lastly, by encompassing efforts directed towards inclusive training, the research protocol promotes action and interventions aimed at creating an inclusive and integrated leisure time system, setting forth the need to foster genuine collaboration and shared responsibility among all actors involved in inclusive processes (Felce & Perry, 1995; Schleien et al., 1996; Wright et al., 2019; Giaconi et al., 2024b). In this sense, the protocol encourages a multisectoral organisation based on the inclusive contribution of each stakeholder involved, promoting a culture of inclusion (Devine & Lashua, 2002; d'Alonzo & Giaconi, 2024).

Going further into detail, the following sections will provide some pedagogical reflections regarding the key aspects of the co-design protocol (Figure 24).

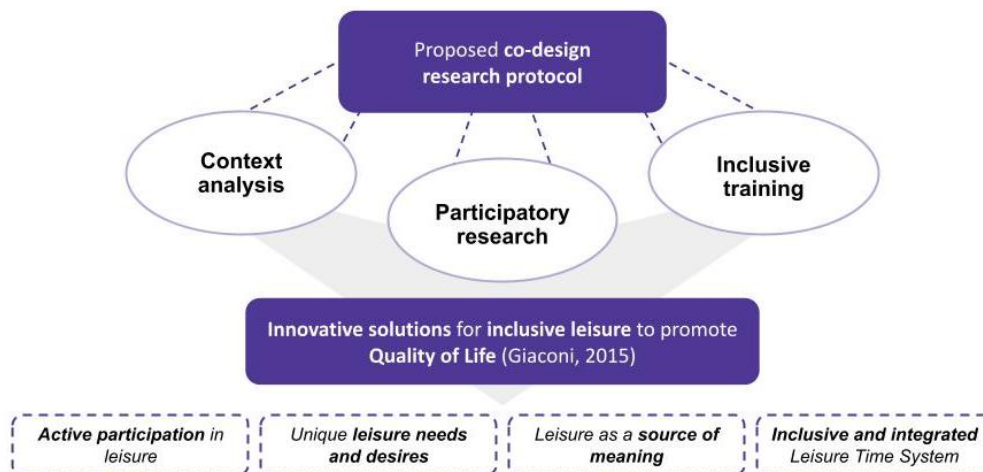


Figure 24 – Key factors and outcomes of the co-design research protocol

7.1 Context analysis for situated solutions

A first core point of the proposed co-design protocol is related to the pedagogical value of context analysis to promote the development of situated and meaningful accessibility solutions. In this sense, context analysis represents a phase of critical reflection and exploration in which the leisure context—in its tangible and intangible elements—is examined with the active participation of people with and without disabilities.

This aspect aligns with the aforementioned bio-psycho-social approach to disability (WHO, 2001), acknowledging the need to understand the complex dynamic interrelations between people’s personal characteristics and the life environments they participate in. In this direction, context analysis allows researchers to identify the barriers that can limit people with disabilities’ social inclusion, while identifying the facilitators that can be introduced to support them, ensuring equal leisure rights (Aiello & Giaconi, 2024; d’Alonzo & Giaconi, 2024). Such an effort promotes a reflective stance among all stakeholders, advancing what

we defined as a pedagogical reading of accessibility by taking into account the relational and experiential dimensions it encompasses (Titchkosky, 2011).

Overall, context analysis represents a central pedagogical resource, ensuring that inclusion-oriented interventions and trajectories can be centred around the concrete environments in which the person is situated, with the aim of creating a tangible and intangible space that can embrace and support them, respecting their unique needs and potentials (d'Alonzo & Giaconi, 2024). Context analysis, in this sense, moves beyond standardised accessibility checklists, promoting an evolving process of promoting inclusion that is grounded and context-specific.

7.2 Co-design for community involvement and social impact

A second central element of the proposed co-design protocol concerns the role of co-design in fostering community involvement and generating social impact. Within the research, co-design was not merely conceived as a methodological tool for developing accessible solutions, but rather as a pedagogical process aimed at empowering communities by actively engaging people with disabilities and museum stakeholders. To this end, this process enabled the creation of a shared space for dialogue and knowledge sharing, where Special Pedagogy expertise met the lived experiences of people with disabilities and the professional competence of experts in history of art and archaeology. From a pedagogical standpoint, the strength of participatory research approaches lies in their ability to serve as effective means for uncovering and valuing the perceptions, needs, and expectations of the stakeholders involved, promoting a generative approach in which knowledge can be co-created to ensure real impact in the contexts of intervention (Schön, 1993; Israel et al., 2010).

The role of participants with disabilities, in this context, goes beyond that of mere beneficiaries of an accessibility-driven intervention, recognising their agency as experts and active protagonists of positive change, sharing perspectives and practices. Consequently, as highlighted, such a dialogic process frames the principles of accessibility and inclusion in their dynamic and relational value (Titchkosky, 2011), establishing a system of symmetry and combined action to foster empowerment, emancipation and self-determination (Del Bianco, 2019; May, 2024). Co-design, in this direction, can give space and resonance to the lived experiences of people with disabilities, offering them the means through which they can advocate for their rights to participate fully in leisure contexts (Sarmiento-Pelayo, 2015; Shogren et al., 2022; Del Bianco et al., 2024; Giaconi et al., 2024a).

These actions allow for the creation of concrete and valuable solutions to the challenges related to promoting inclusive process within leisure contexts, in a critical process of co-construction of shared meanings related to accessibility practices (Titchkosky, 2011; Steen, 2013). The identification of joint perspectives on inclusive leisure, in this scenario, allows the promotion of context-specific interventions to support people with and without disabilities, revealing the dynamic nature of co-design and its potential social impact (Shogren et al., 2022; Del Bianco et al., 2024; Giaconi et al., 2024a). Ultimately, co-design represents a catalyst for social innovation, generating tangible impacts that can extend beyond museum settings, fostering cooperation and critical awareness to promote a more equitable and participatory model of leisure participation (Giaconi & Del Bianco, 2025).

7.3 Staff training for a culture of inclusion

The third and last core component of the proposed protocol concerns the promotion of inclusive competencies and know-how among museum staff, fostering the development of a genuine culture of inclusion within cultural institutions. In this sense, personnel training represents a key phase for translating theoretical principles of accessibility into everyday practices, ensuring that inclusive solutions—both technological and traditional—are supported by adequate relational mediation (Giaconi et al., 2024b; Giaconi & Del Bianco, 2025).

In continuity with these considerations, scientific literature highlights how professional development represents a key determinant for building inclusive and accessible cultural environments (Haythorne et al., 2022; Giaconi et al., 2024b), facilitating participation and inclusion through everyday practices. In this direction, as previously highlighted, the acquisition of knowledge and skills directly impacts the attitudes of leisure personnel, determining their ability to provide welcoming and accessible leisure environments for people with disabilities (UN, 2006; Shields & Synnot, 2014).

Inclusive training, in this direction, should address the pedagogical dimension of inclusive leisure, encouraging reflective thinking and the awareness of one's impact as an active agent of inclusion. Accordingly, inclusive training serves as a transformative learning opportunity, aligning professional practices with shared visions on inclusion, ensuring that accessibility can be sustained and continuously improved beyond the duration of the experimental intervention through the everyday work of leisure personnel.

Following a network perspective, the promotion of inclusive knowledge and skills goes beyond the individual leisure operator, aiming at reaching out to a wider context of action, in which their practices can contribute to the spread of a culture of inclusive leisure. Through inclusive training, extending beyond personal competences, entire organisational cultures can benefit from the promotion of

inclusive training, increasing synergy, shared responsibility, and collaboration to translate isolated interventions to systemic and community-based actions (Giaconi et al., 2024b). The outcomes of this research, in this line, confirm how inclusive training can expand opportunities for full participation of people with disabilities, encouraging a multi-sectoral organisation based on the inclusive skills of all the stakeholders involved in leisure settings (Boucher et al., 2010; Wright et al., 2019; Steinhardt et al., 2021), towards the creation inclusive leisure contexts (Devine & Lashua, 2002; Giaconi & Del Bianco, 2025).

Conclusions and research trajectories

The reflections proposed in this work, following a special pedagogical perspective, have allowed us to acknowledge leisure not as a simple interlude between daily commitments, but as an existential dimension that contributes decisively to the construction of life paths oriented towards an authentic Quality of Life, and that can find meaningful implementation trajectories through co-design approaches. In this regard, it is useful to summarise the fundamental passages of the text, which aim to highlight how supporting the life path reinforces, among other important aspects, the need to interpret and operationalise the dimension of leisure time from a pedagogically oriented perspective.

In detail, the first chapter allowed us to approach the very concept of leisure, analysing it as an articulated construct. What was reconstructed with reference to the coordinates offered by Leisure Studies highlighted not only its conceptual complexity, but also the different angles through which it can be defined, from the systemic to the subjective level. In this sense, it was possible to recognise how the in-depth study of leisure from an interdisciplinary point of view involves dealing

with a dynamic and multi-level reality, which can take on different meanings and unfold in numerous key aspects.

The analysis of scientific literature on leisure made it possible to outline a functional framework for the investigation proposed in the second chapter, aimed at deepening our understanding of issues in social inclusion of people with disabilities within leisure settings. The mapping of the main evidence offered by the studies on this specific topic provided a clear view of the opportunities, challenges and critical issues relating to the active participation of people with disabilities in this dimension, relaunching numerous and relevant lines of pedagogical reflection. These lines of thought allowed us to recall, with reference to leisure, some of the main topics of investigation in Special Pedagogy research: from the accessibility of contexts to self-determination, from the role of the family network to the promotion of a culture of inclusion.

Based on the considerations and implications that emerged, in the third chapter, we proceeded to present the Framework of Quality of Life (Schalock & Verdugo Alonso, 2002, 2006; Giaconi, 2015) as a theoretical and operational model capable of offering an adequate perspective for a pedagogical conceptualisation of leisure in the care provision for people with disabilities. Specifically, the main multidimensional models of QoL recognised in the literature were presented, reconstructing the pedagogical meanings related to leisure that they offer. This step, therefore, allowed us to precisely define the relationship between leisure and the main domains of Quality of Life, exploring its educational and inclusive role in the care provision for people with disabilities.

Moving along the identified trajectories and delving into the field of educational planning and practices, the fourth chapter explored leisure within the Life Project, as a conceptual and operational resource capable of guiding the planning of existential paths aimed at improving the Quality of Life of people with disabilities.

In this sense, it was possible to illustrate how leisure can be the subject of specific interventions and support, highlighting pedagogical principles, alignment procedures and assessment and monitoring tools considered useful for guiding and integrating this dimension within the Life Project.

The reflections proposed in chapter four laid the ground for the illustration of the experimental research which was conducted within the topic of inclusive leisure. Specifically, considering the need to promote co-design trajectories and inclusive training, chapter five introduced the experimental research, which focuses on museum accessibility as a leisure setting. Providing a rationale for investigating cultural life participation within the wider frame of inclusive leisure, we illustrated the research background (concerning the topic of accessibility and new museology), objectives, design and tools, highlighting the co-design protocol that it proposes as a resource for creating inclusive leisure contexts.

Finally, chapter six illustrated the two case studies proposed as application scenarios of the research and co-design protocol, related to two local museums from the Marche region. The chapter provided an in-depth analysis of the different research phases that were conducted, highlighting procedures, challenges, and key findings. Specifically, the proposed co-design protocol turned out to be a resourceful and sustainable trajectory to promote inclusive leisure contexts, bridging the gap between theory and practice by addressing, through participatory approaches and Special Pedagogy epistemological frameworks, the main needs identified with reference to the promotion of active participation and social inclusion of people with disabilities in the dimension of leisure.

In conclusion, between research perspectives and challenges that are still open for Special Pedagogy research, it is perhaps possible to affirm—breaking the quantum laws referred to at the beginning of this text (Kinnebrock, 2013)—that leisure time represents, rather than a *time*, a *space*: a space which is educational and

inclusive, tangible and intangible, individual and collective. A space capable of embracing and enhancing experiences, relationships and projects, reflecting the uniqueness of each person's life journey. According to this interpretation, by turning into a meaningful *space*, leisure time is capable of representing a transformative and generative dimension, as potential as it is concrete, helping to guarantee the inviolable right to plan and pursue existential trajectories that are perceived as meaningful and oriented towards an authentic Quality of Life (Giacconi, 2015; Giacconi & Del Bianco, 2025).

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